Final Project Document

for

YouMatter

Version 1.0 approved

Prepared by:

- **A’laa Mohamed Mohamed Hamdy 19P6621**
- **Anas Salah Abdelrazik Saad Eldin 19P9033**
- **Ahmed Amr MohyEldin Elgayar 19P8349**
- **Ahmed Akram Mohamed 19P4777**
- **Mohamed Abdelrahman Mohamed 19P8505**

Ain Shams University, Faculty of Engineering, CESS.

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1.1 Introduction

1.1.1 Purpose

YouMatter is a website extension to any college's website that focuses on students' and their mental health. It maintains the students' mental health to ensure a healthy, and smooth academic experience to get the best out of them and challenge themselves. All students go through academic stress, anxiety, depression and other factors that might affect their life. So, this website's target is to help students reach for help and embrace their insecurities to make them live a better life.

1.1.2 User Requirements

YouMatter is an added feature or extension to any College website. Mental Health affects students at large, and so to ensure the perfect academic quality, student's mental health state should be monitored as it has a huge impact on the student's academic life. YouMatter will allow college students to book an appointment with a professional psychiatrist when they feel that they are facing a mental health issue such as major depression., anxiety …etc. that they cannot understand or deal with it. The therapy sessions provided could be online; as some students might fear the idea of visiting a psychiatrist, or it could be an appointment in the clinic where they can meet. YouMatter main role is to continuously keep an eye on the student's mental health and so, regular sessions with the students after each semester will be held with certified life coaches to make sure that everything is on track and the student's mental health is not affected and not at risk and be aware of any factors during the academic semester that endangers their state. The therapy sessions will be for free, so that students who cannot afford visiting a psychiatrist can now be treated professionally. YouMatter will keep students' sessions' history as well as any medical prescriptions list to be aware of the student's condition and reminds them of the next appointment. YouMatter will enable human interaction opportunities while providing professional feedbacks from the

specialists after every session. It will also act as a reminder for the students of their upcoming sessions, so that they don't get caught up in the hassle of their studies. The feedback history is sent to the university, for statistics purposes to be able to deal better with its' students and be aware of all the factors that might put the students at a mental health risk.

1.2 Feasibility Analysis

1.2.1 Contributions to organizational objectives

As far as the organization is concerned which is in this case; the university, statistics are made based on the specialist's feedbacks according to their interactions and deductions with troubled students which assists the university in dealing more efficiently with students' educational journey in the university.

1.2.2 Financial Feasibility

The website provides many benefits for both the students and the university. Students will benefit financially from eliminating the need to search for mental health specialists that might be expensive Also, the symptoms resulted from mental health issues left untreated might cost the student a lot of money to treat the symptoms resulted from the mental health issues they know nothing about. Bearing in mind the financial costs for maintenance of the system. On the other hand, the university will benefit from graduating students having a concrete and healthy mind set that can bear with any circumstances which will result in a good reputation for the university.

1.2.3 Technical Feasibility

The software is achievable by technology by:

1. the use of different programming languages such as HTML, CSS, JavaScript, Python/Java, typescript.

2. Compilers such as NetBeans.

3. The website could be developed and by purchasing a domain that can be on the World wide Web (www) accessed by different devices.

4. Diagram Data tools such as Lucid Chart.

5. Integrated development environment such as WebStorm.

1.2.4 2 Resources and Time Feasibility

- Laptops (Available)
- Programming Tools (Available)
- A time span of 8 weeks (Available).
- Hosting Space (Available).
- Enough team member (Available).

1.2.5 Stakeholders Role

The main stakeholders of this software project are the students themselves who will be the most beneficiaries from this website, the specialists (psychiatrists, life coaches) who will be serving for the purpose of this website, the university which will be tracking the output from the resulted sessions, while the stakeholders who will be in relation with the software project will be the developers

1.3 System Requirements

1.3.1 Functional Requirements

1. The student should be able to select the “YouMatter” tab from the university’s main website.
2. The student should login using their college ID and their password, which will transfer them to the main page.
3. The students would then be able to book an appointment with their desired specialists, according to their current issues; whether they are dealing with personal issues or academic stress/anxiety issues, in which the specialists are categorized for the stated issues, the psychiatrists deal with personal issues while the life coaches are responsible to deal with the academic issues.
4. The students will have options to choose whether they want the session to be held online or a face-to-face session or chat.
5. The system will show the availability of each specialist with their set timings along the week from which the student can choose from.
6. Students can choose the duration of the session.
7. Get a confirmation for the reservation.
8. The students would be able to track the feedbacks of their sessions from the “Feedback” tab in the main page.
9. Reminders are also notified to students on the main page to keep the students aware of the upcoming sessions and booked appointments and incoming feedbacks.
10. All students are reminded for their monthly checkup using the reminders.

1.3.2 Non-functional Requirements

1. The students should be accustomed to the website after 2-3 visits to easily navigate within the website.
2. The website should have less than 10% rate of failure occurrence.
3. The software should be implemented using HTML, CSS, JavaScript, and Java/Python.

4. The project should be developed within 3 weeks.
5. The software applicable for the following browsers: Google Chrome, Safari, Mozilla Firefox.
6. The website should apply to the confidentiality laws of the Mental Health Association.
7. Follow the rules and policies of the college's site.

1.4 Requirements Validation:

1.4.1 Requirements Traceability Matrix:

	REQ-1	REQ-2	REQ-3	REQ-4	REQ-5	REQ-6	REQ-7	REQ-8	REQ-9	REQ-10
REQ-1										
REQ-2	D									
REQ-3		D								
REQ-4		D	D							
REQ-5		D	D	D						
REQ-6		D		R	D					
REQ-7		D	R	R	D					
REQ-8		D								
REQ-9		D			R	D	D			
REQ-10		D								

REQ-2: The Student has to select the "YouMatter" tab to be able to log in
REQ-3: In order for the student to book an appointment she/he has to login into their account
REQ-4: The student will choose how they want their meeting to be once they choose whether they want a life coach or a psychiatrist
REQ-5: The student will be able to choose from the available slots when they choose the specialist and how they want their meeting
REQ-6: The student will be able to choose the duration according to the meeting session and the day chosen
REQ-7: Totally depends on the availability of the slots and partially depends on the specialists and the type of meeting
Req-8 Depends on the login of the student to be able to view the feedback
REQ-9: Depends if the reservation is confirmed or not to remind the student and also depends whether the student checked the last feedback or not
REQ-: The student has to login to be reminded

Table 1 Requirements Traceability Matrix

1.4.2 Source Traceability Matrix for functional requirements:

Stakeholders \ Requirements	REQ-1	REQ-2	REQ-3	REQ-4	REQ-5	REQ-6	REQ-7	REQ-8	REQ-9	REQ-10
Students	✓	✓	✓	✓	✓	✓		✓	✓	✓
Psychiatrists				✓	✓	✓	✓	✓		
Life Coaches				✓	✓	✓	✓	✓		
University Management System								✓		✓
Developer	✓	✓	✓	✓	✓		✓	✓	✓	✓

Students: as a stake holder makes use of every function in the system
Psychiatrists: provide the available slots and their timings while providing confirmation and feedback after sessions
Life Coaches: provide the available slots and their timings while providing confirmation and feedback after sessions
University Management System: Needs the feedback to analyze the results and make appropriate actions depending on the statistics provided while also checks if all students have made it to their checkups.
Developer: should be provided by all these requirements to design and implement depending on them

Table 2 Source Traceability Matrix for Functional Requirements

1.4.3 Source Traceability Matrix for non-functional requirements:

Stakeholders \ Requirements	REQ-1	REQ-2	REQ-3	REQ-4	REQ-5	REQ-6	REQ-7
Students	✓	✓					
Psychiatrists		✓				✓	
Life Coaches		✓				✓	
University Management System	✓	✓		✓		✓	✓
Developer	✓	✓	✓	✓	✓	✓	✓

Req1: Both students and the university want to get used to the website fast and it should be the developer concern
Req2: All stakeholders are concerned about a low failure rate for the website
Req3: Developer concern to build the website using specific languages
Req4: Delivery time is a concern to the developer and the university to launch it
Req5: developer concerned to make the website accessible by different platforms
Req6: Psychiatrists, Life Coaches and the university main concern is to stick to the legal laws which makes the developer concerned about it too
Req7: The university and the developer cares about launching a legal website

Table 3Traceability Matrix for Non-Functional Requirements

1.5 Time Plan

YouMatter Project Schedule

Ain Shams University

Project Start Date 4/21/2021 (Wednesday) Display Week 1

WBS	TASK	LEAD	START	END	DAYS	% DONE	WORK DAYS
1	**Requirment Specification and Analysis**			-			-
1.1	Feasibility Study	Team	Mon 4/19/21	Wed 4/21/21	3	100%	3
1.2	Deciding functionalities	Team	Thu 4/22/21	Fri 4/23/21	2	100%	2
1.3	Gathering Requirements	A'laa,Anas	Sat 4/24/21	Mon 4/26/21	3	100%	1
1.4	Compare with existing systems	A'laa,Anas	Tue 4/27/21	Wed 4/28/21	2	100%	2
1.5	Negotiate conflicts	Team	Sun 4/29/18	Mon 4/30/18	2	100%	1
1.6	deciding time plan	Team	Sat 5/01/21	Sun 5/02/21	2	50%	0
1.7	deciding time plan	Team	Thu 5/20/21	Fri 5/21/21	2	50%	
1.8	SRS document	A'laa,Anas	Sat 5/08/21	Tue 5/11/21	4	30%	2
1.9	SRS document	A'laa,Anas	Mon 5/17/21	Thu 5/20/21	4	30%	
2	SRS document	A'laa,Anas	Fri 5/21/21	Mon 5/24/21	4	40%	
3	**Design Process**			-			-
3.1	Use Case Diagram	Gayar,Akra	Wed 5/12/21	Thu 5/13/21	2	100%	2
3.2	Swimlane Diagram (use cases)	Anas ,Gaya	Sat 5/15/21	Sun 5/16/21	2	100%	0
3.3	Component Diagram	Ahmed	Mon 5/17/21	Mon 5/17/21	1	100%	1
3.4	Data Flow Diagram	Anas	Thu 5/20/21	Sun 5/23/21	4	100%	2
3.5	System Architecture	Abdelrahm	Sun 5/23/21	Tue 5/25/21	3	100%	2
3.6	Sequence Diagrams	Akram	Tue 5/25/21	Tue 5/25/21	1	100%	1
3.7	User Interface	Alaa	Sat 6/05/21	Sat 6/05/21	1	100%	0
3.8	State Diagram	Alaa					
4	**Implementation**			-			-
4.1	Back End	Anas,Akrar	Mon 5/17/21	Fri 5/28/21	12	75%	10
4.2	Database	Team	Tue 5/18/21	Fri 5/21/21	4	80%	4
4.3	Front end	Alaa ,Abde	Mon 5/17/21	Mon 5/24/21	8	100%	6
4.4	Assembly	Team	Fri 5/28/21	Tue 6/01/21	5	90%	3
5	**Testing Document**			-			-
5.1	User guide	Gayar	Sat 6/05/21	Sun 6/06/21	2	100%	0
5.2	End-User guide	Akram	Sat 6/05/21	Sun 6/06/21	2	100%	0
5.3	Conclusion	Abdelrahm	Mon 6/07/21	Mon 6/07/21	1	100%	1
5.4	Appendices	Team	Tue 6/08/21	Tue 6/08/21	1	100%	1
							-
							-

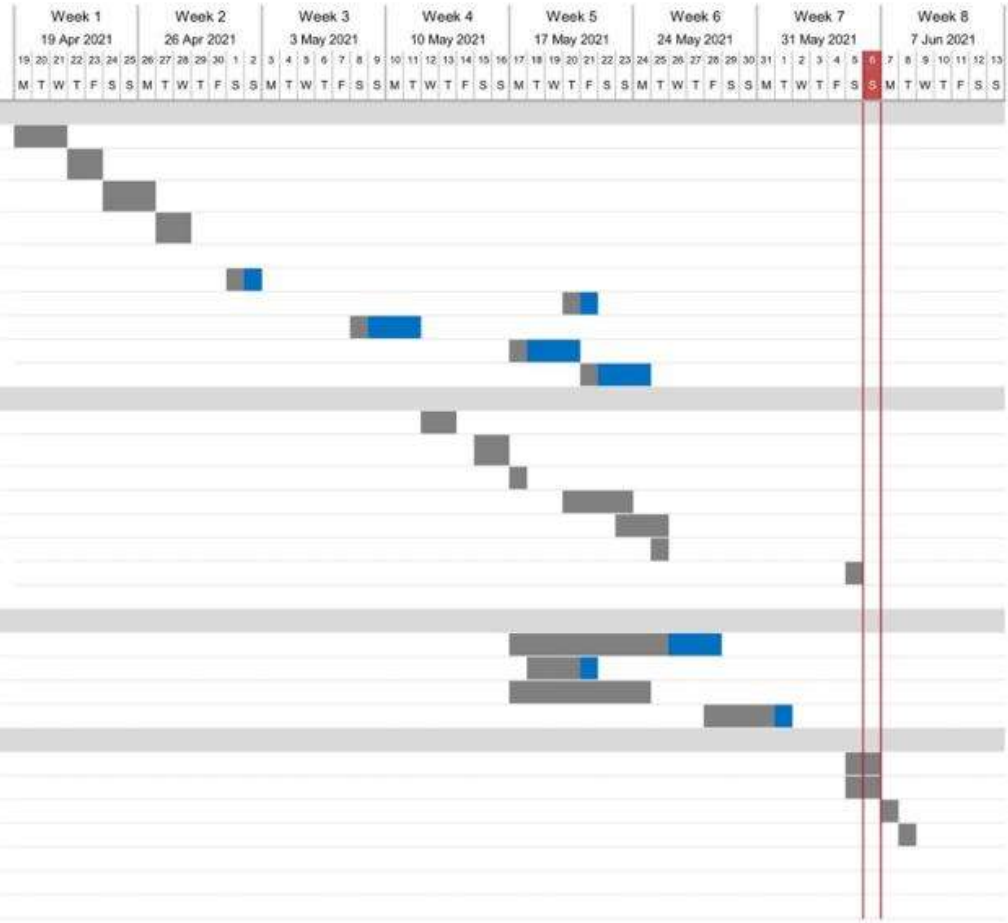


Figure 1 Gantt Chart

1.6 Conclusion:

YouMatter is a student-based idea, that focuses on helping students dealing with their difficulties and allow them to embrace that we are different. The university life is a rollercoaster of stress, happiness, and pressure that might affect the student's health if left unnoticed. Therefore, YouMatter goal is to monitor the student's health and keep an eye on any fluctuations of the student's health. Mental Health does not only affect the student's mind but also affects his physical health. the Mental Health Organization UK (2016) found that people with the highest levels of self-rated distress (compared to lowest rates of distress) were 32% more likely to have died from cancer.1,2 Depression has been found to be associated with an increased risk of coronary heart diseases. So, to ensure that the next generation is healthy from all aspects we must treat the root of the problems and eliminate the risks of any mental health issues to have a healthy, innovative generation. Not all students go through the same obstacles, some go through financial, parental and personal issues and have no one to speak up with and that might lead to suicide so seeking a professional and confidential help will prevent losing lives. Also, from the statistics delivered to the university, it will be able to acknowledge the difficulties the students face to improve the way of education to ensure the perfect education for its students.

This document provided the enough knowledge about YouMatter website starting from the introduction where the user requirements where stated to be able to understand what the system is going to provide. It showed the Feasibility study from all perspectives and then stated all the system requirements needed to implement the website mentioning all the functional and non-functional requirements. The time plan for the system implementation is also provided by a Gantt chart showing all the phases.

2. Analysis and Design document

2.1 Use-Case Diagram and the Swimlane Diagram for each Use Case

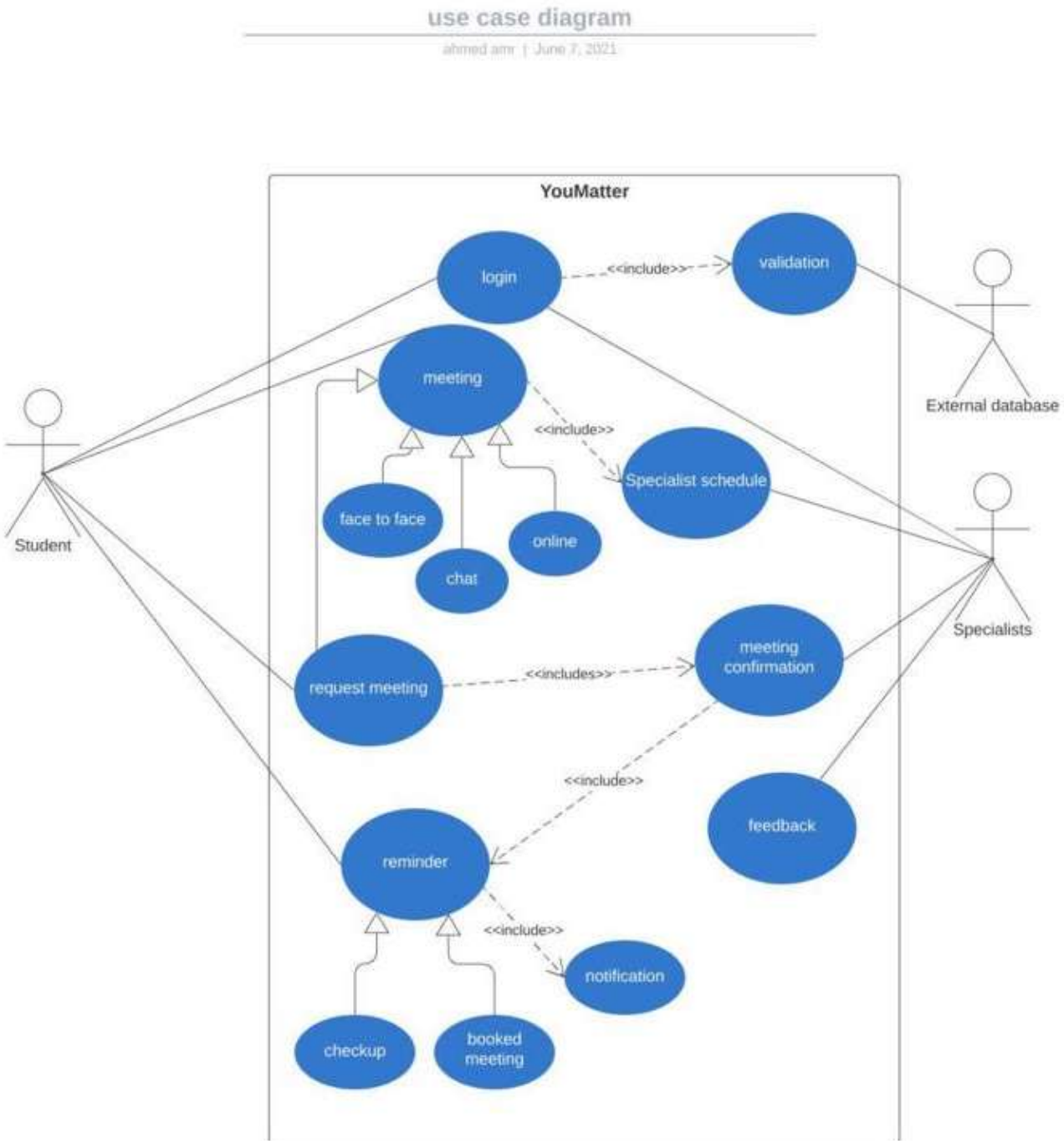


Figure 2 Use Case Diagram

2.1.1 Use case name: Meeting

-*Related requirements:* requirement 3

-*Goal in progress:* manage meeting details

-*Pre-conditions:* Already signed in.

Successful end condition: meeting is reserved (booked).

-*Failed end condition*: no available slots.

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger:* reserving a meeting session

-*Included:* specialist schedule

-*Main flow :*

Steps	Actions
1	Meeting request
2	Choose specialist
3	Include::specialist
	Retrieving specialist schedule available slot
	Student choose time slot
4	Make reservation
5	Choose meeting type

-*Extensions :*

Steps	branching action
3.1	no available slots found
3.2	reservation incomplete

2.1.2 Use case name: Request Meeting

-*Related requirements:* requirement 4

-*Goal in progress:* reserve time slot

-*Pre-conditions*: Already signed in.

-*Successful end condition:* meeting is reserved (booked)

-*Failed end condition:* meetings are not reserved

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger:* reserving a meeting session

-*Base-cases:* Meetings

-*Included:* specialist schedule

-*Main flow:*

Steps	Actions
1	Meeting request
2	Include::specialist Retrieving specialist schedule available slot

3	Student choose time slot
4	Retrieving specialist schedule available slots
5	Make reservation

-*Extensions:*

Steps	branching actions
2.1	no available slots found
2.2	reservation incomplete
3.1	remove reserved time slot from availability

2.1.3 Use case name: Face to face

-*Related requirements:* requirement 4

-*Goal in progress:* reserve face to face meeting

-*Pre-conditions:* specialist schedule is free during selected time

-*Successful end condition:* face to face meeting is reserved (booked)

-*Failed end condition:* meeting is not confirmed booked

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger*: choosing a slot in specialist schedule

-*Base-cases:* Meetings

-*Main flow:*

Steps	Actions

1	Meeting time and specialist info is received
2	Meeting is confirmed from specialist
3	Meeting is booked
4	available slot is removed from specialist schedule

-*Extensions:*

Steps	branching actions
2.1	specialist does not confirm meeting

2.1.4 Use case name: Online

-*Related requirements:* requirement 4

-*Goal in progress:* reserve online meeting

-*Pre-conditions:* specialist schedule is free during selected time

-*Successful end condition:* online meeting is reserved (booked)

-*Failed end condition:* meeting is not confirmed booked.

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger:* choosing a slot in specialist schedule

-*Base-cases:* Meetings

-*Main flow:*

Steps	Actions
1	Meeting time and specialist info is received

2	Meeting is confirmed from specialist
3	Meeting is booked
4	available slot is removed from specialist schedule

-*Extensions*:

Steps	branching actions
2.1	specialist does not confirm meeting

2.1.5 Use case name: Chat

-*Related requirements:* requirement 4

-*Goal in progress:* reserve chat meeting

-*Pre-conditions:* specialist schedule is free during selected time

-*Successful end condition:* chat meeting is reserved (booked)

-*Failed end condition:* meeting is not confirmed booked.

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger:* choosing a slot in specialist schedule

-*Base-cases:* Meetings

-*Main flow:*

Steps	Actions
1	Meeting time and specialist info is received
2	Meeting is confirmed from specialist

3	Meeting is booked
4	available slot is removed from specialist schedule

-*Extensions*:

Steps	branching actions
2.1	specialist does not confirm meeting

2.1.6 Use case name: Specialist Schedule

-*Related requirements:* requirement 5

-*Goal in progress:* updating schedule time slots

-*Pre-conditions:* Already signed in.

-*Successful end condition:* meeting is reserved (booked)

-*Failed end condition:* time slots are not available.

-*Primary actors:* Student

-*Secondary actors:* Specialist

-*Trigger*: reserving a meeting session

-*Base-cases:* Meetings

-*Included:* specialist schedule

-*Main flow:*

Steps	Actions

1	Retrieving specialist schedule available slot
2	Student choose time slot
3	Updating time slots
4	Make reservation

-*Extensions*:

Steps	branching actions
3.1	removing time slot that is reserved

2.1.7 Use case name: Reminder

-*Related requirements:* requirement 9

-*Goal in progress:* display to the students' reminders for weekly checkup or booked meetings

-*Pre-conditions:* a) weekly checkup countdown ends b) a meeting booking was confirmed

-*Successful end condition*: a reminder is displayed to the student at the right time

-*Failed end condition:* no reminder is displayed / student misses meeting or checkup

-*Primary actors:* student

-*Secondary actors:* none

-*Trigger:* a meeting/checkup is upcoming

-*Included:* notification

-*Main flow:*

Step	Action
1	confirmed booked meetings and checkup time is checked

2 the upcoming meetings/checkup and their remaining time is displayed in reminders tab

3 time remaining for up close meetings and checkup is checked

4 notification is sent to student

Include:: notification

5 the details of the up-close meeting/checkup are received

6 a notification is displayed to the student

-*Extensions:*

Step branching action

1.1 the upcoming meetings or checkups is not displayed in the reminders tab

1.2 the time remaining for each upcoming meeting is not displayed in the reminders tab.

2.1.8 Use case name: notification

-*Related requirements:* requirement 7, requirement 9

-*Goal in progress:* send upcoming meeting/checkup notification to student

-*Pre-conditions:* a meeting/checkup is scheduled.

-*Successful end condition:* a notification is sent to the student with the meeting/checkup details

-*Failed end condition:* the student is not notified of the meeting/checkup

-*Primary actors:* student

-*Secondary actors:* none

-*Trigger:* a scheduled meeting/checkup is up-close

-*Main flow:*

step action

1 check time remaining for upcoming meeting/checkup
2 notify student that there is a meeting/checkup upcoming

-*Extensions:*

step branching action

1.1 too much time remaining for meeting/checkup

2.1.9 Use case name: checkup

-*Related requirements*: requirement 10

-*Goal in progress:* display upcoming checkup reminders to student

-*Pre-conditions:* weekly checkup is approaching

-*Successful end condition*: checkup reminder is displayed

-*Failed end condition:* no reminder is displayed to student

-*Primary actors:* student

-*Secondary actors:* none

-*Trigger:* next weekly checkup is scheduled

- reminder

-*Main flow:*

step	action
1	check for next checkup
2	display appropriate reminder with meeting details and time remaining for checkup

-*Extensions:*

step	branching action
1.1	no upcoming meetings/checkup

2.1.10 Use case name: booked meeting

-*Related requirements*: requirement 9

-*Goal in progress:* display upcoming meeting reminders to student

-*Pre-conditions:* a meeting is confirmed and scheduled

-*Successful end condition*: meeting reminder is displayed

-*Failed end condition:* no reminder is displayed to student

-*Primary actors*: student

-*Secondary actors:* none

-*Trigger:* a meeting is confirmed and scheduled

-*Base-cases:* reminder

-*Main flow:*

step	action
1	check for next confirmed meetings
2	display appropriate reminder with meeting details and time remaining for meeting

-*Extensions:*

step	branching action
1.1	no upcoming meetings

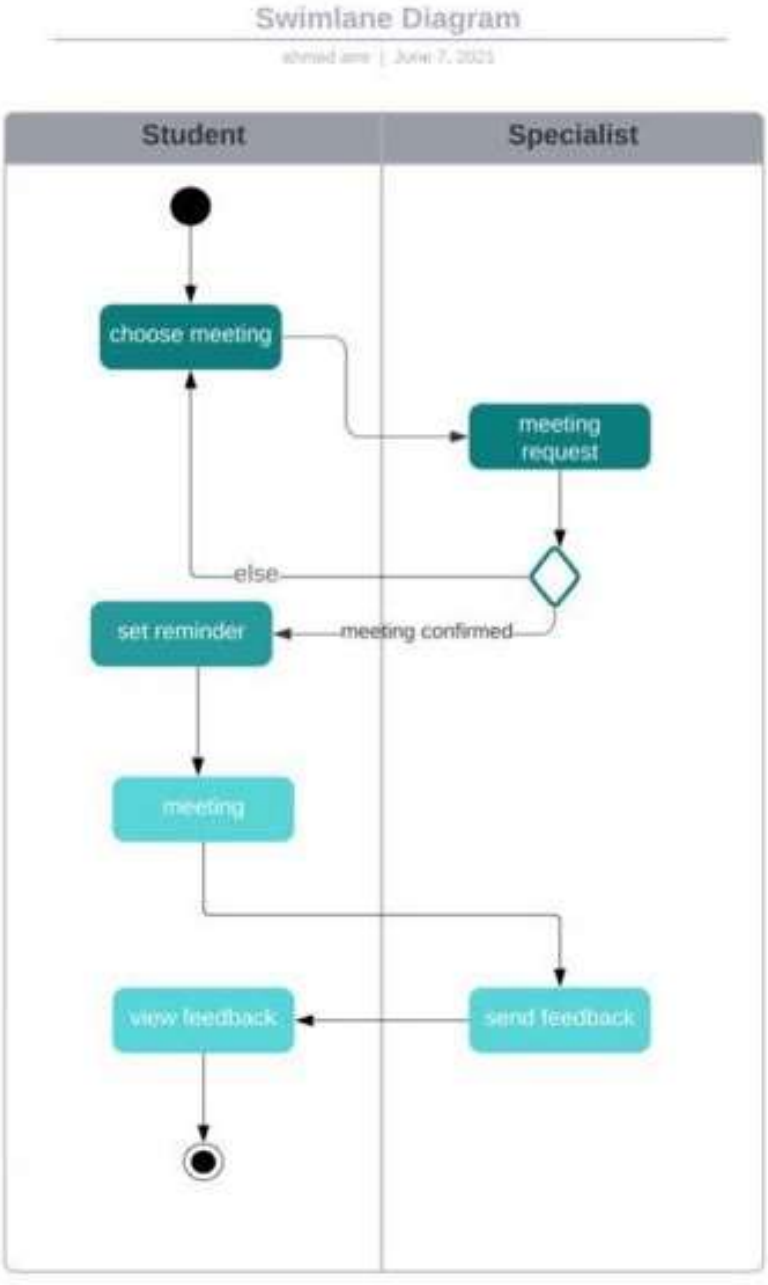


Figure 3 Swimlane Diagram

2.2 Interaction Diagram (Sequence Diagram)

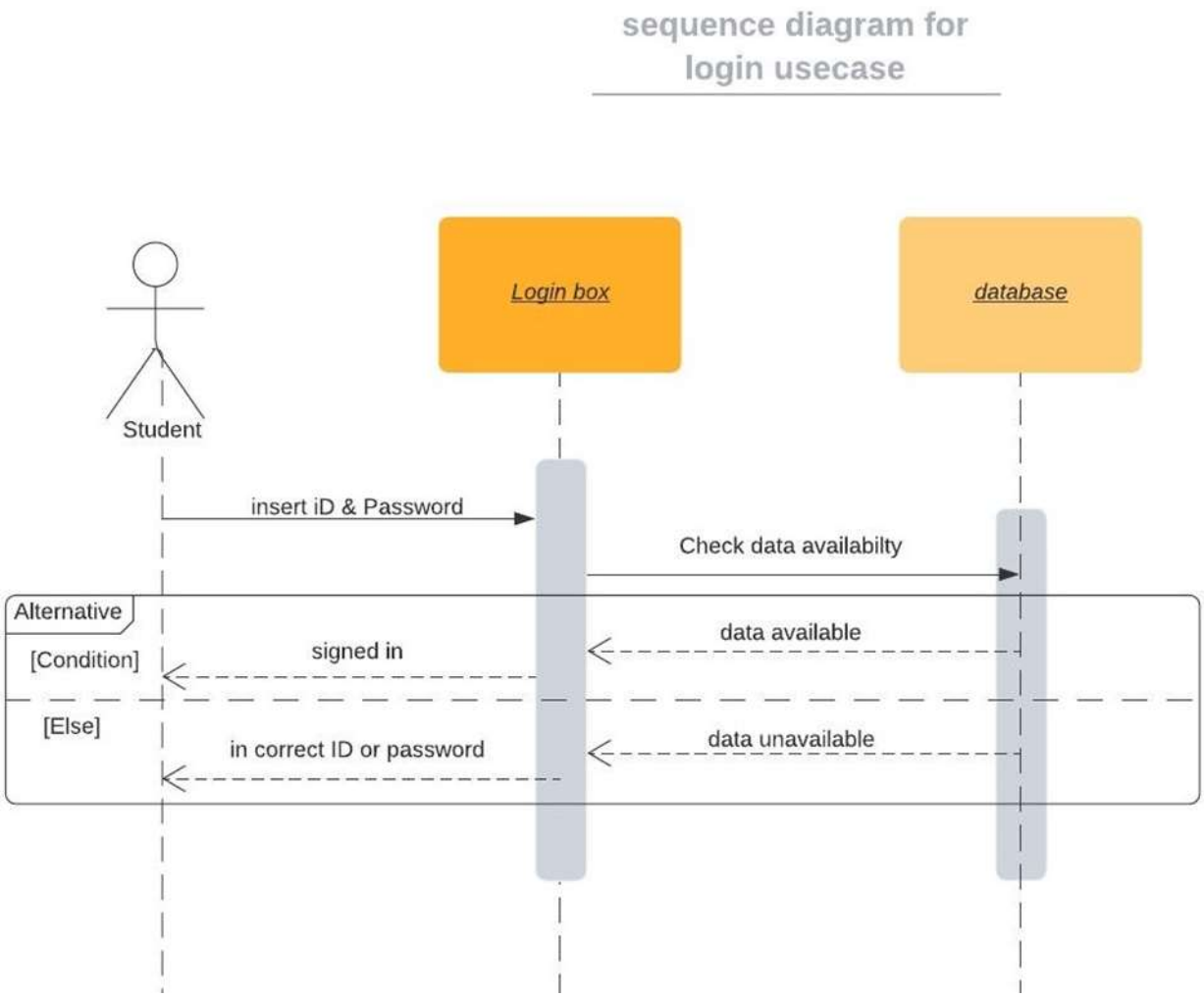


Figure 4 Sequence Diagram for login use case

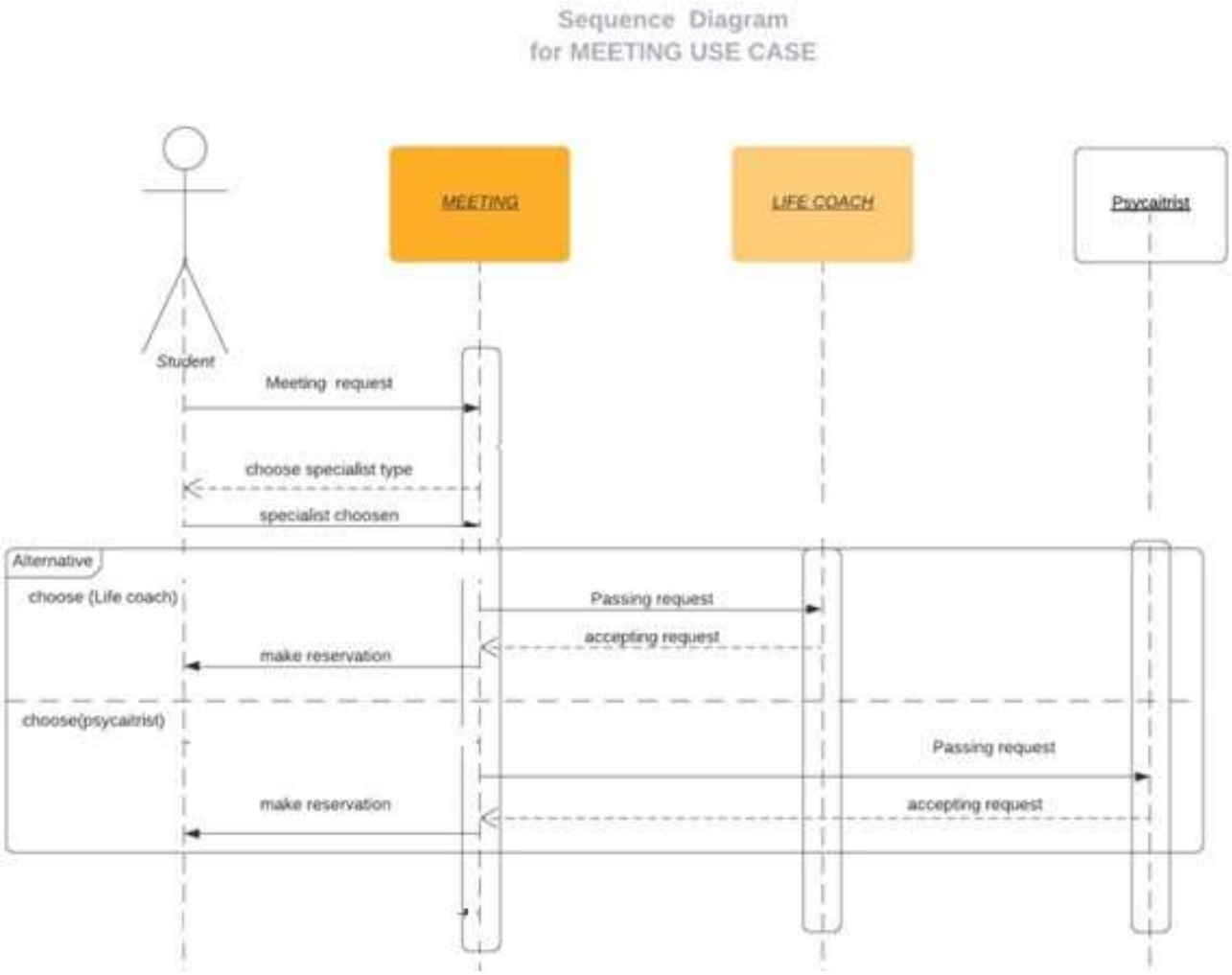


Figure 5 Sequence Diagram for meeting use case

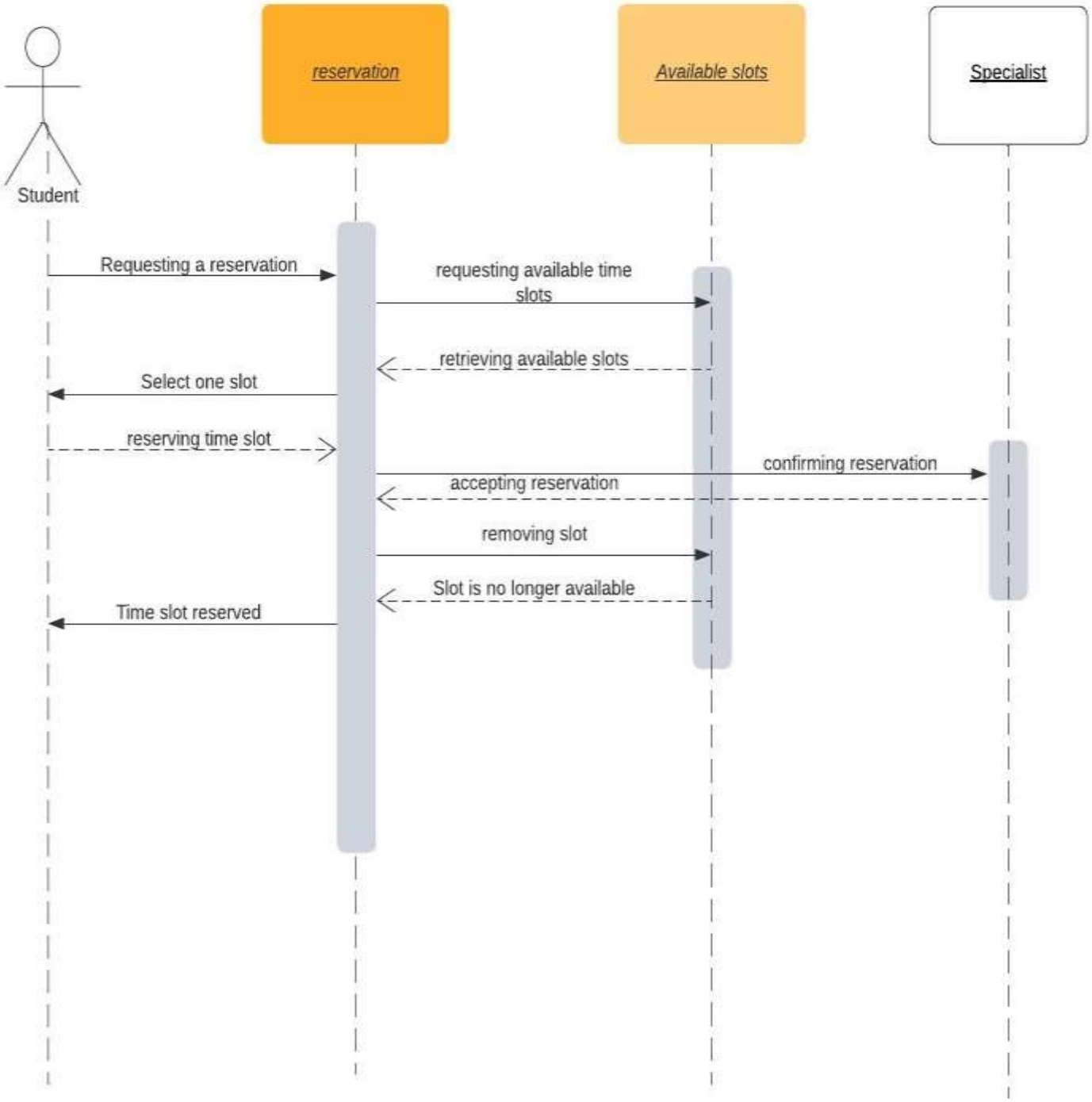


Figure 6equence diagram for reservation use case

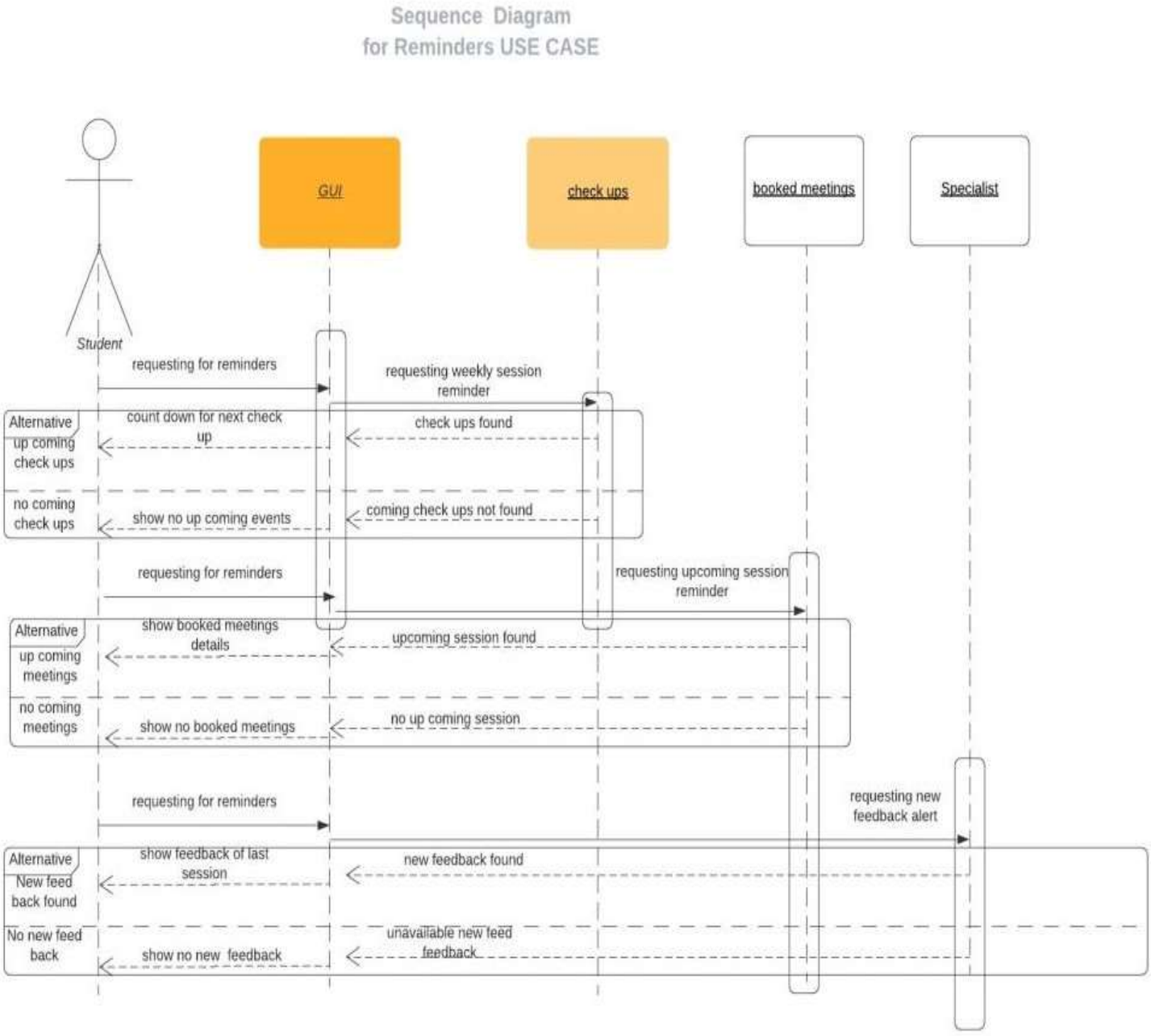


Figure 7 Sequence diagram for Reminders use case

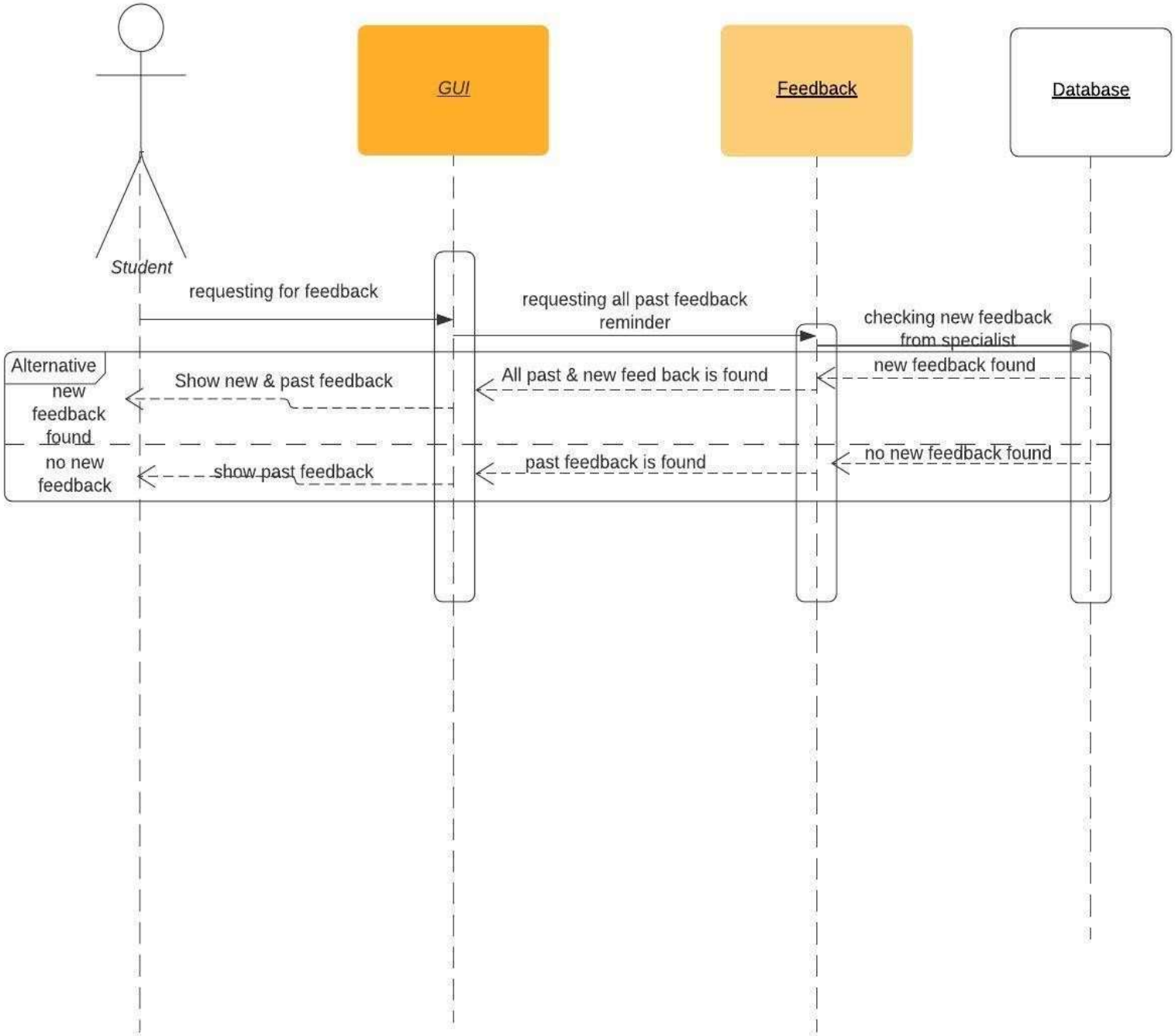


Figure 8 Sequence Diagram for feedback use case

2.3 State Diagram

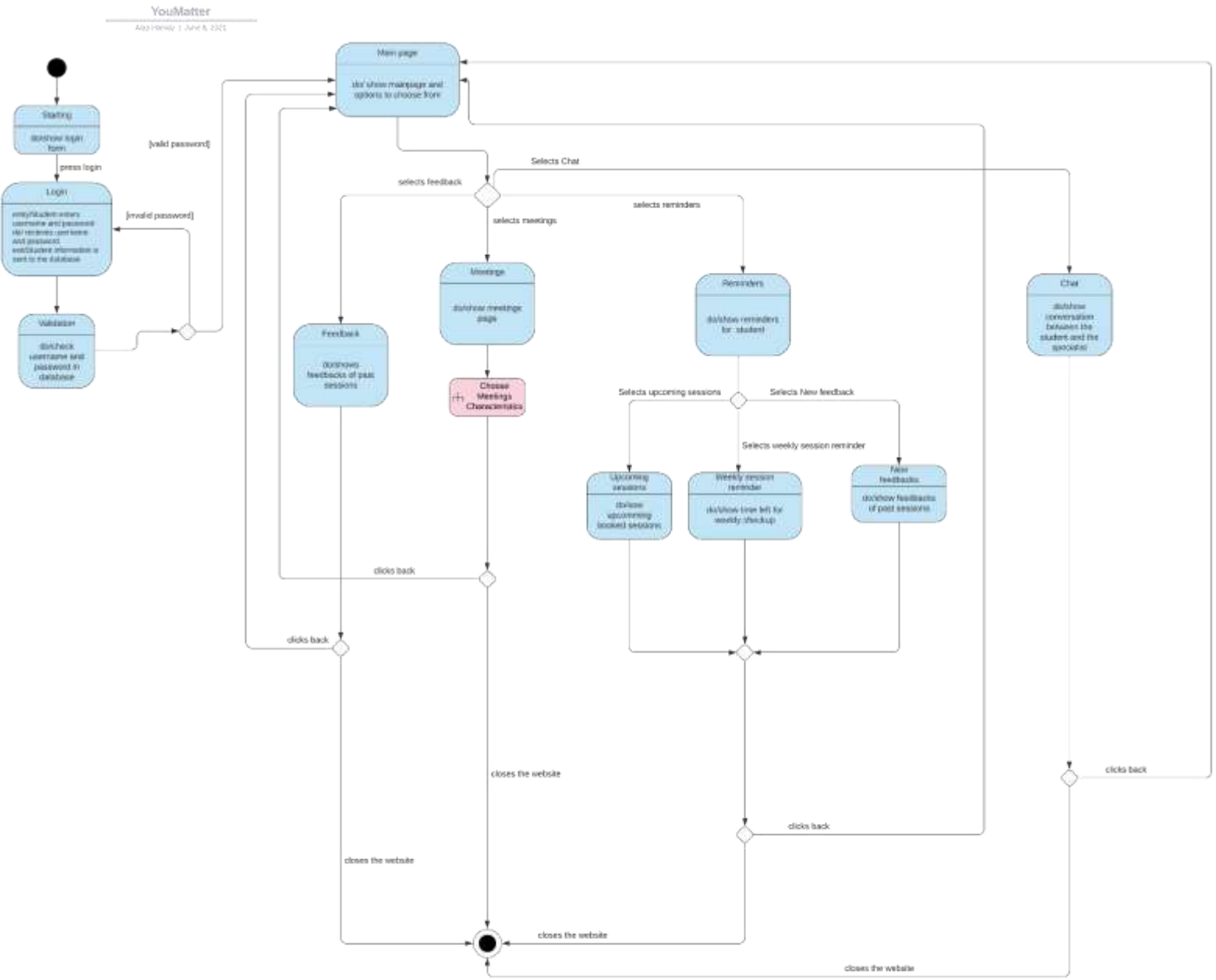


Figure 9 State Diagram 1

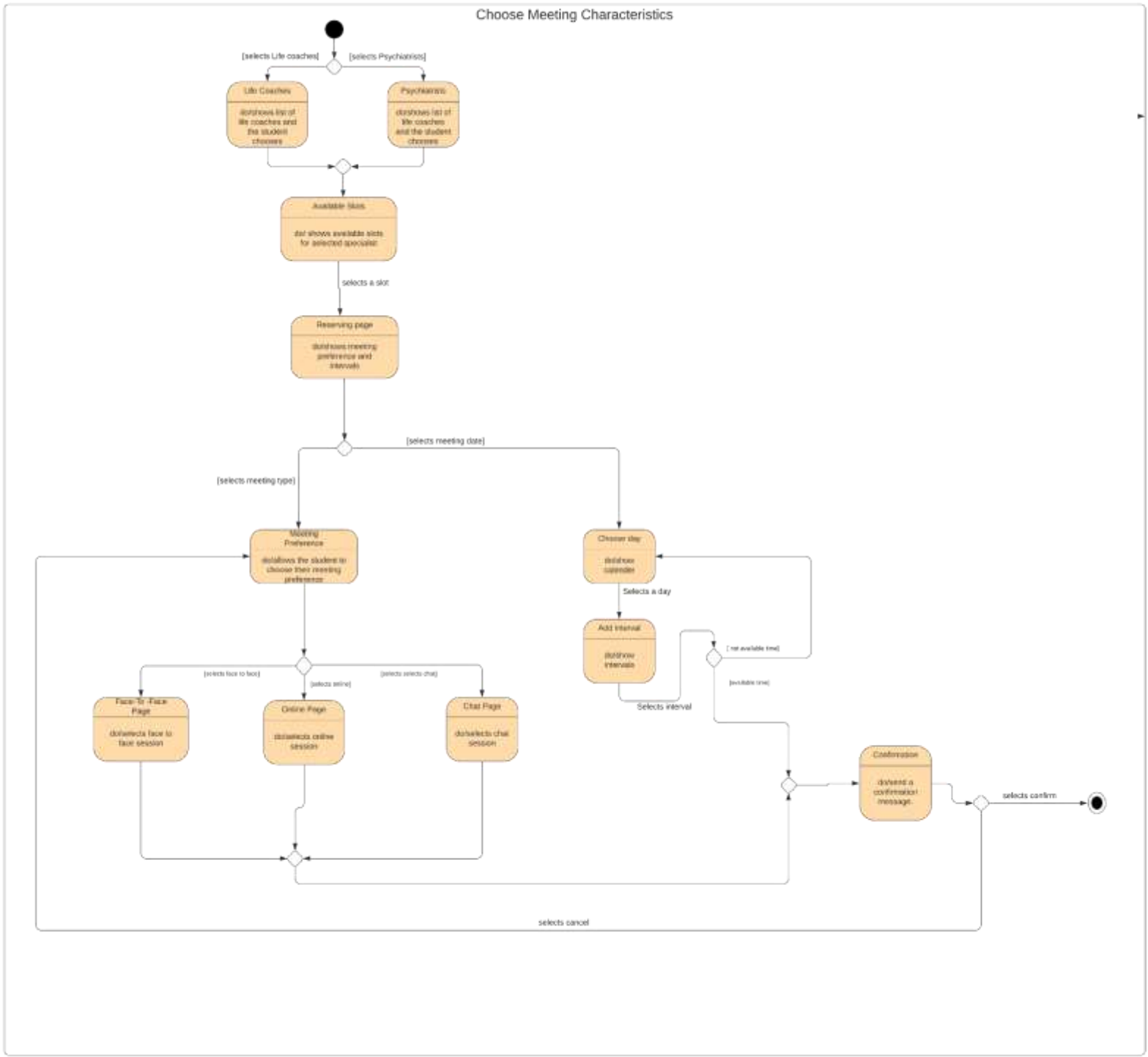


Figure 10 State Diagram 2

2.4 Data Flow Diagram

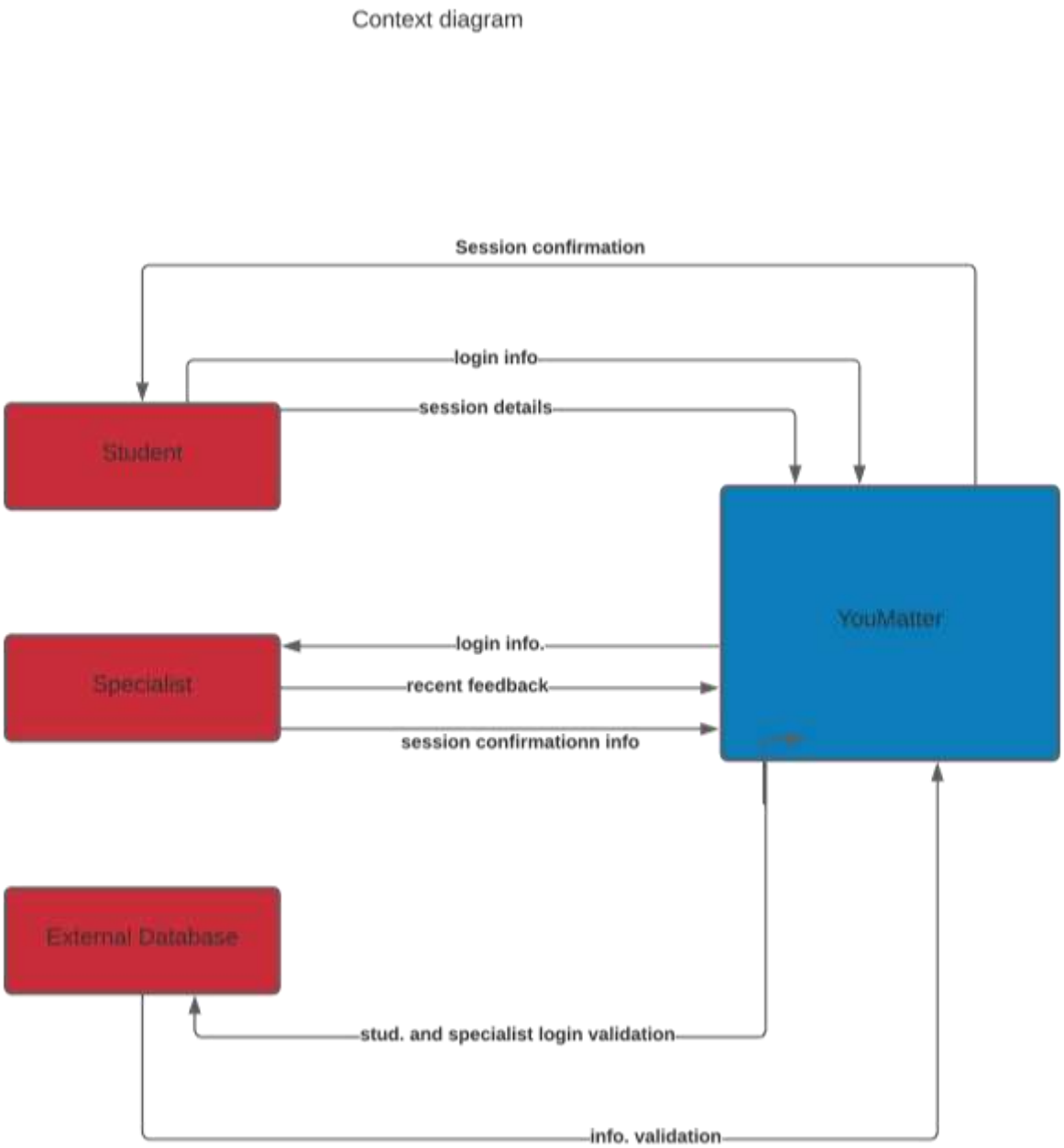


Figure 11 Context Diagram

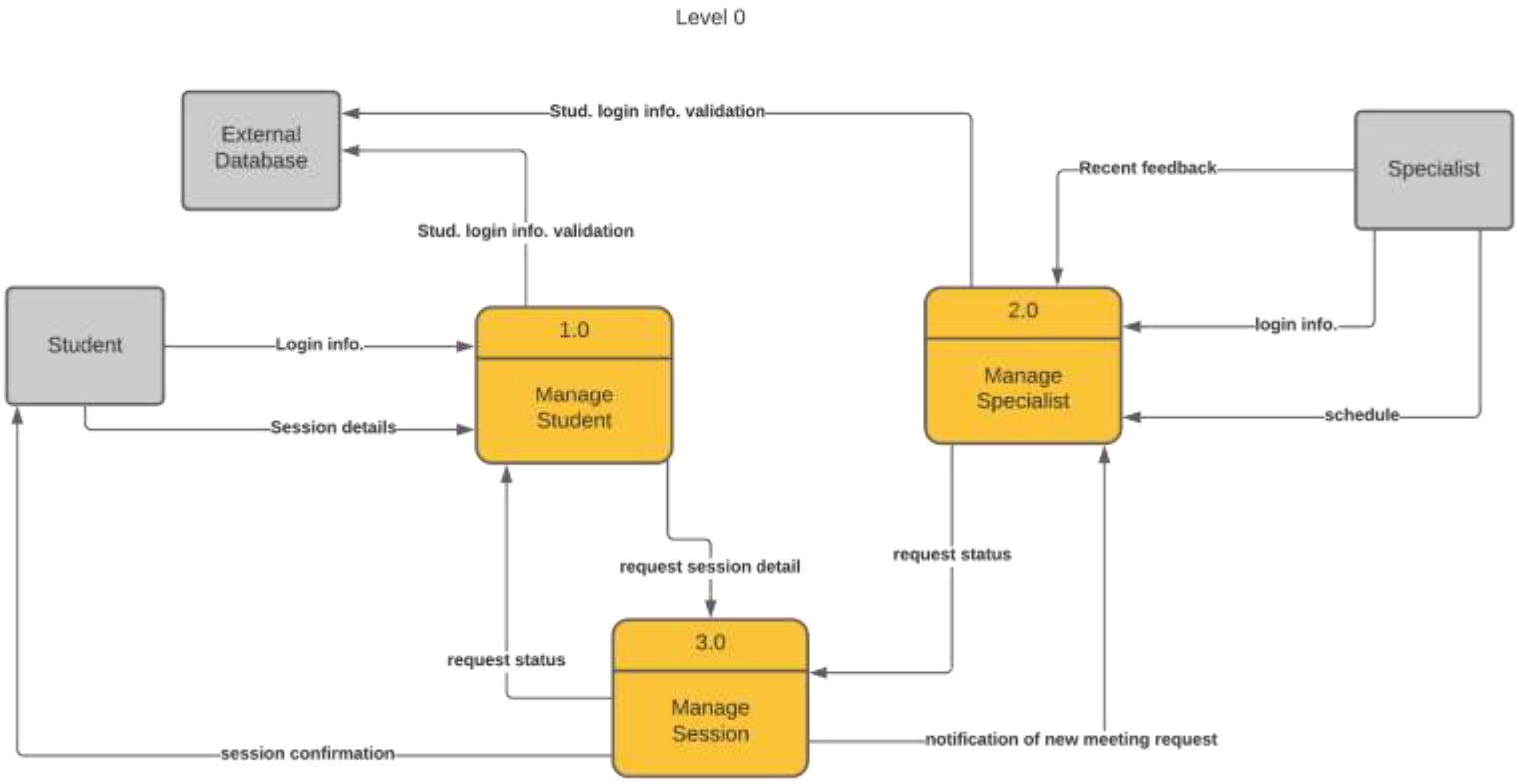


Figure 12 Level 0

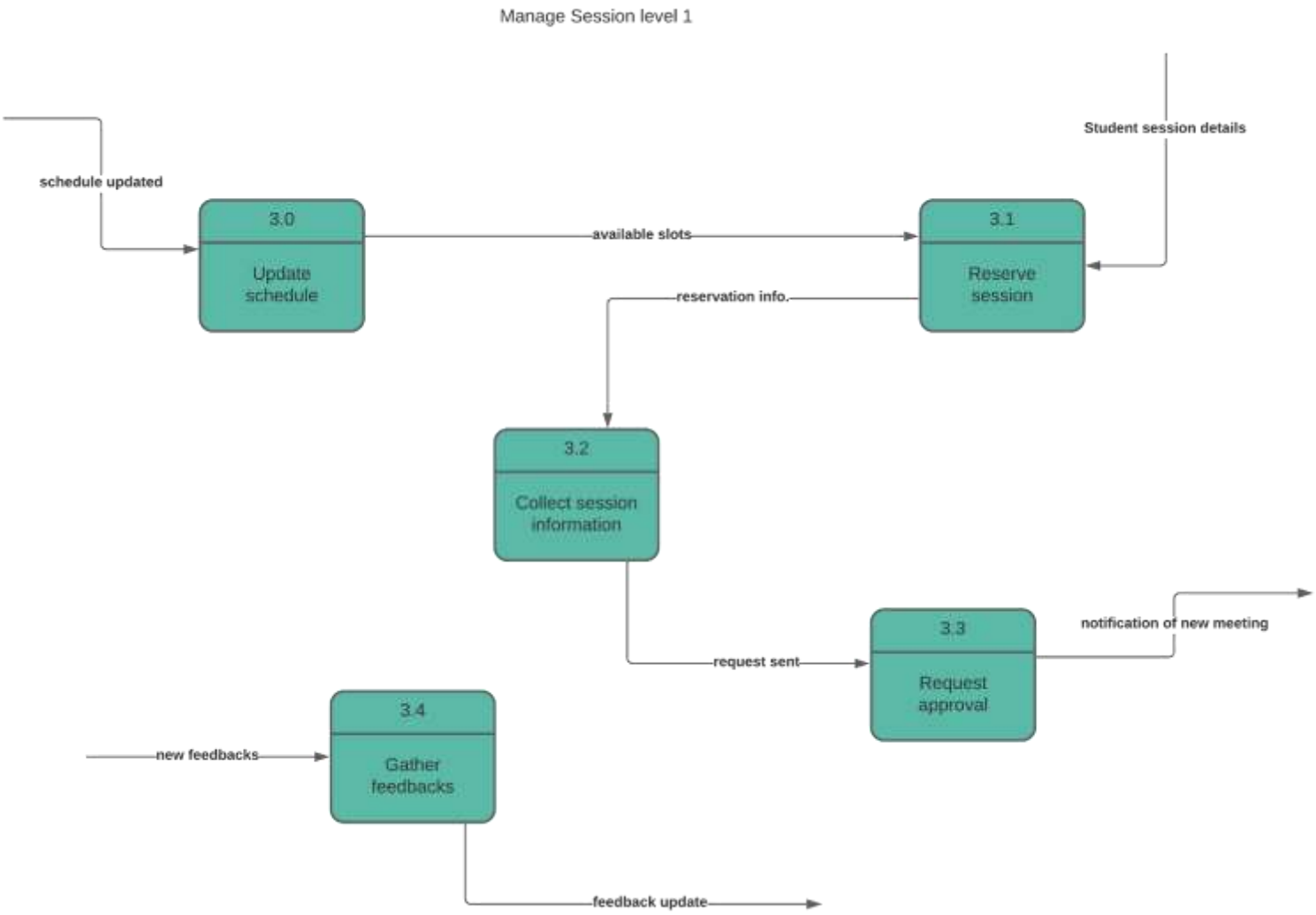


Figure 13 Level 1 Manage Session

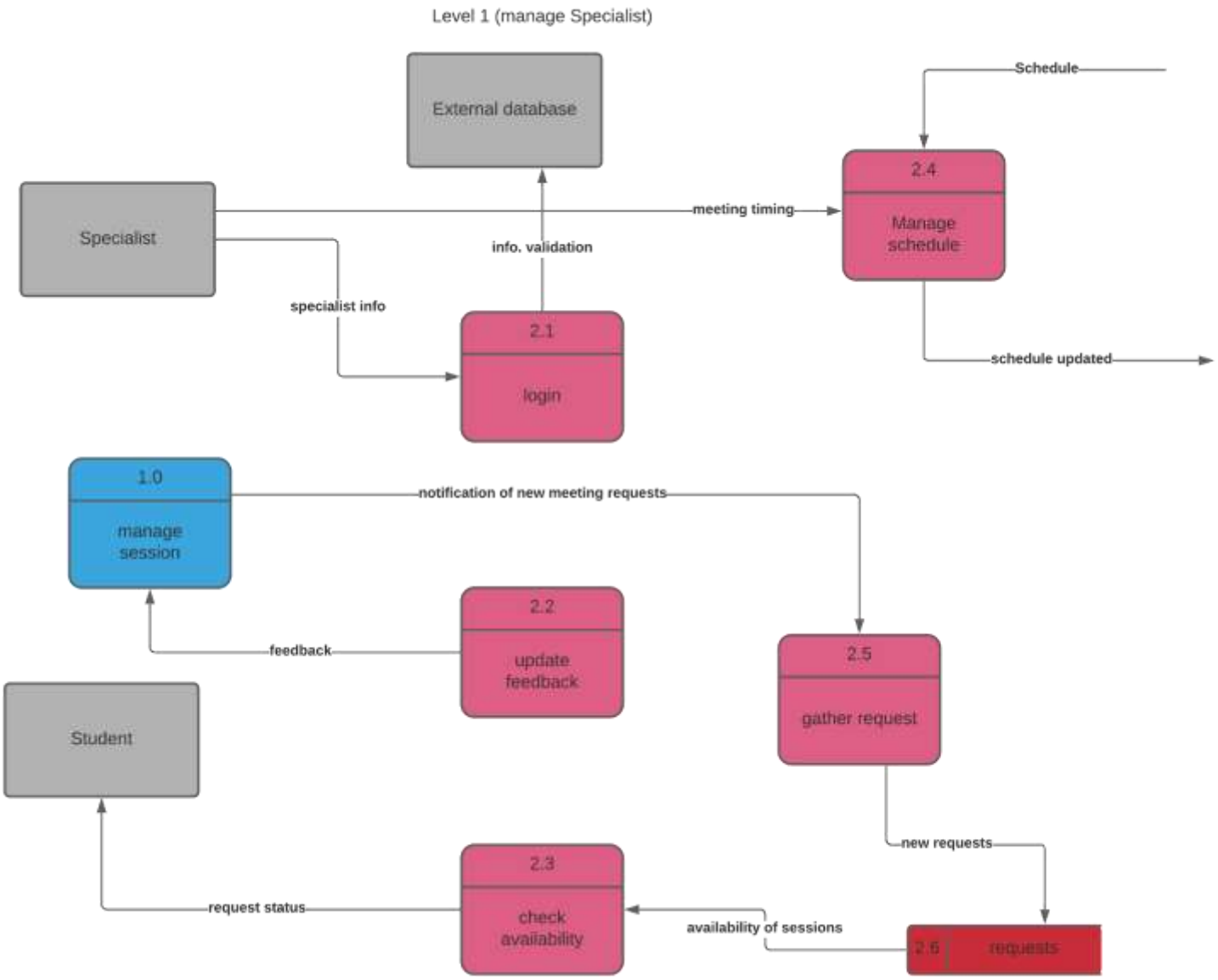


Figure 14 Level 1 Manage Specialist

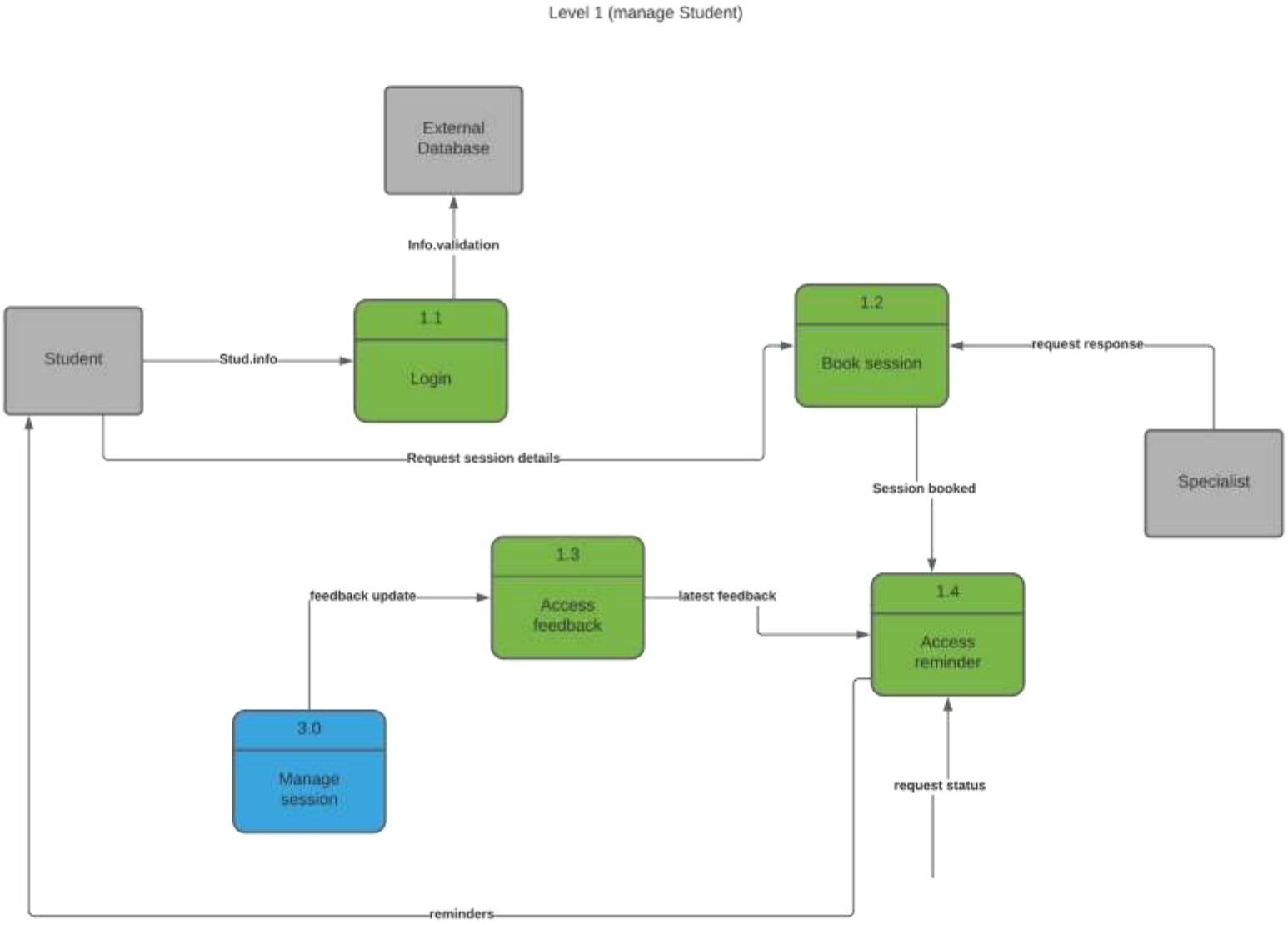


Figure 15 Level 1 Manage Student

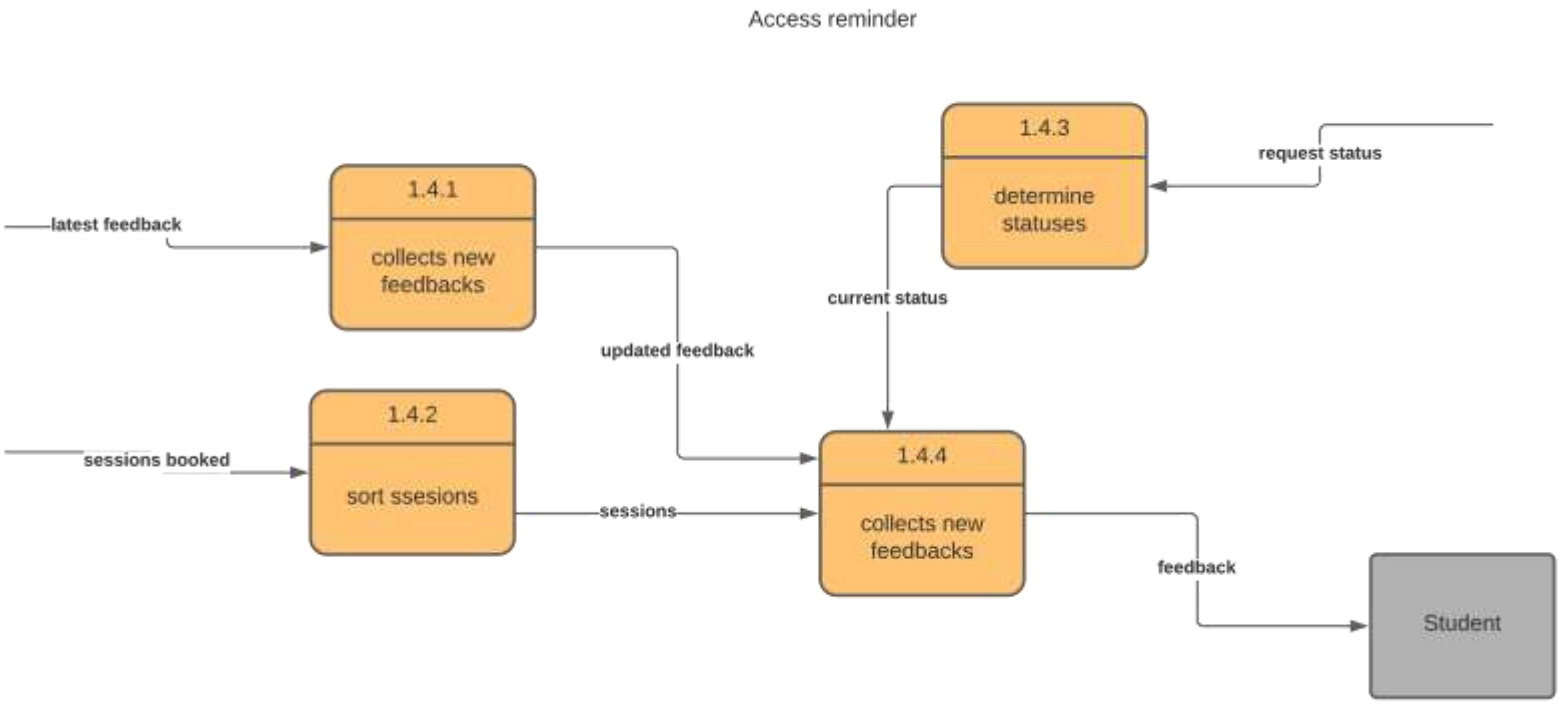


Figure 16 Level 2 Access Reminders

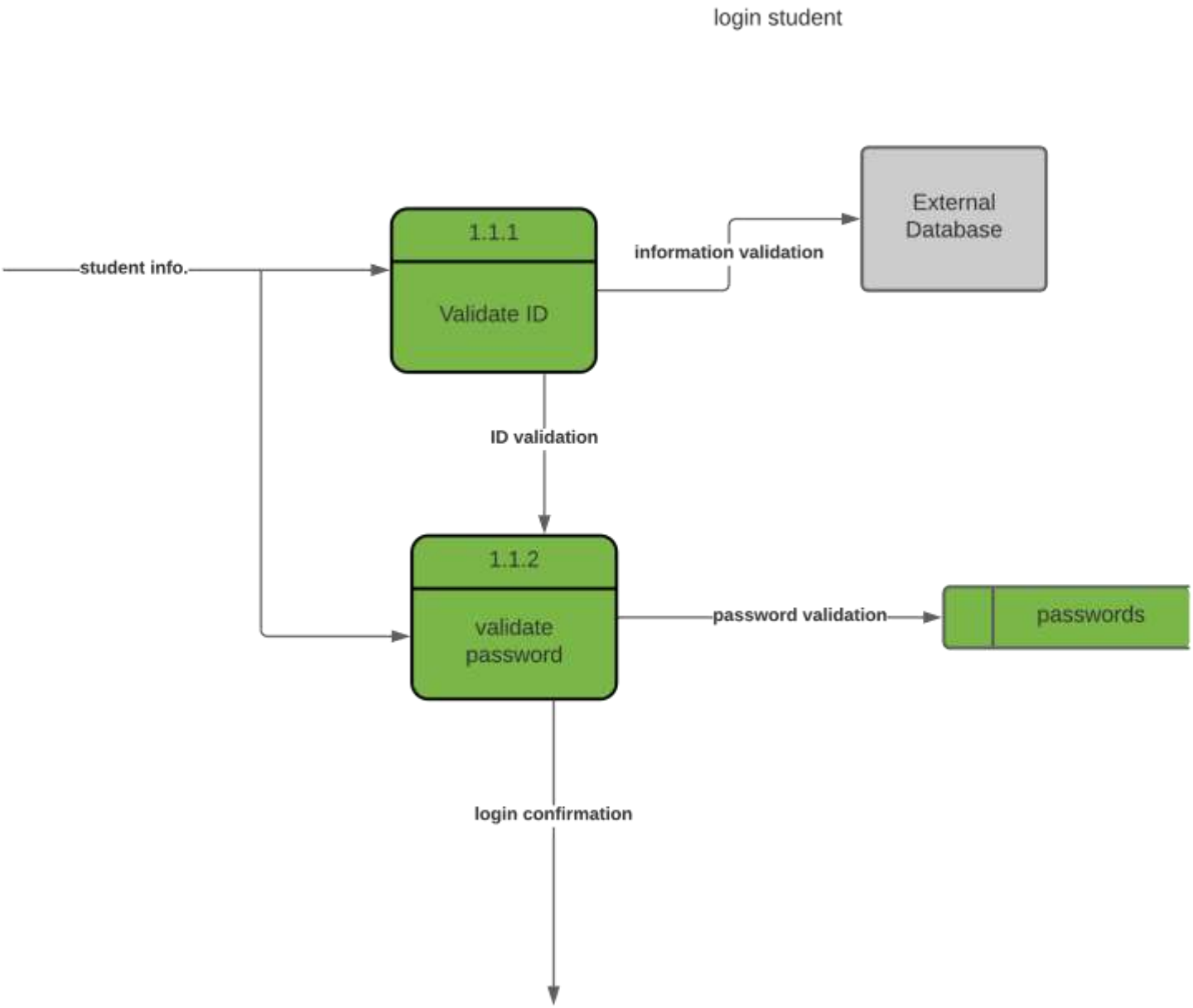


Figure 17 Level 2 Login student

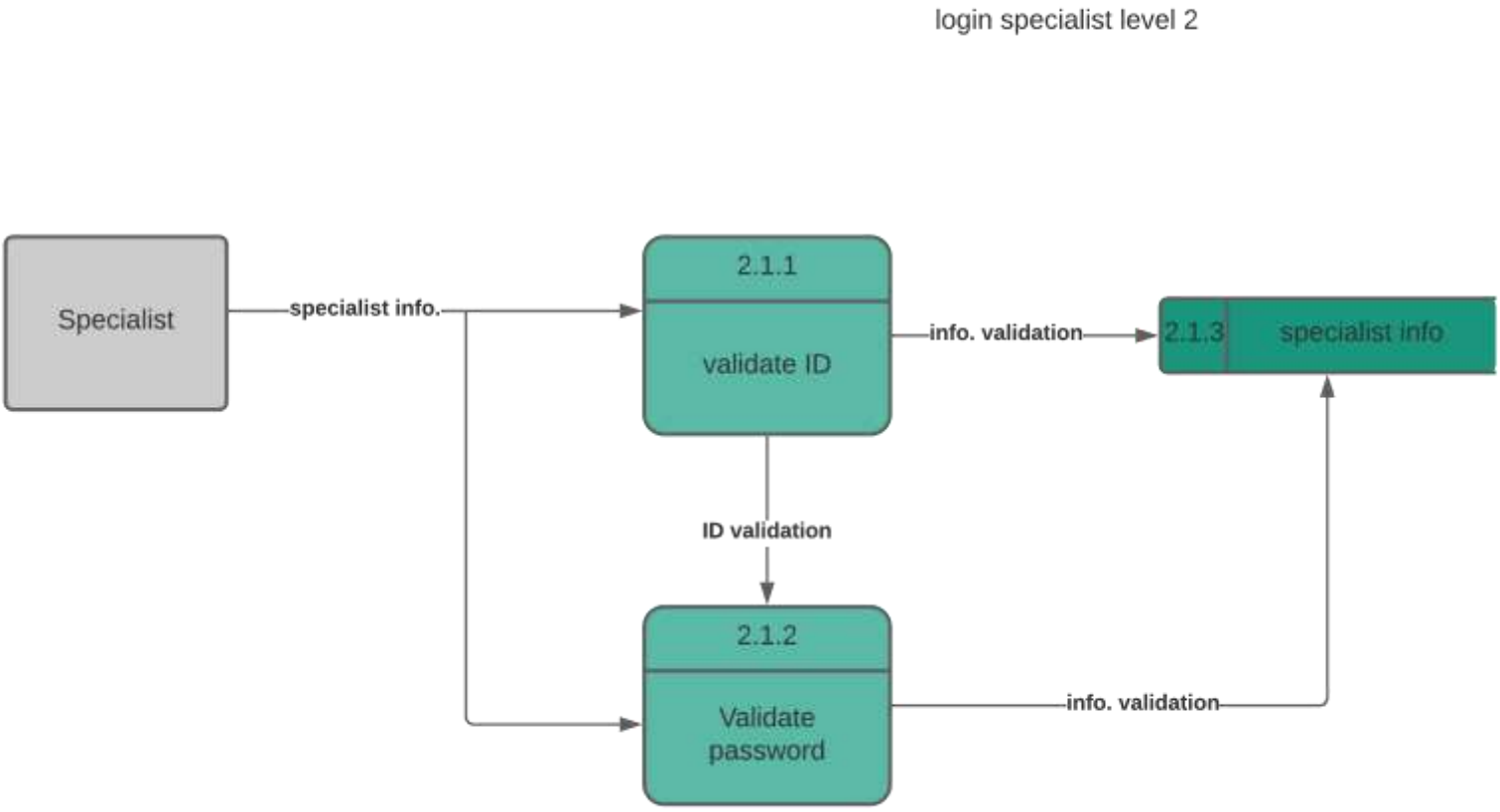


Figure 18 Level 2 login specialist

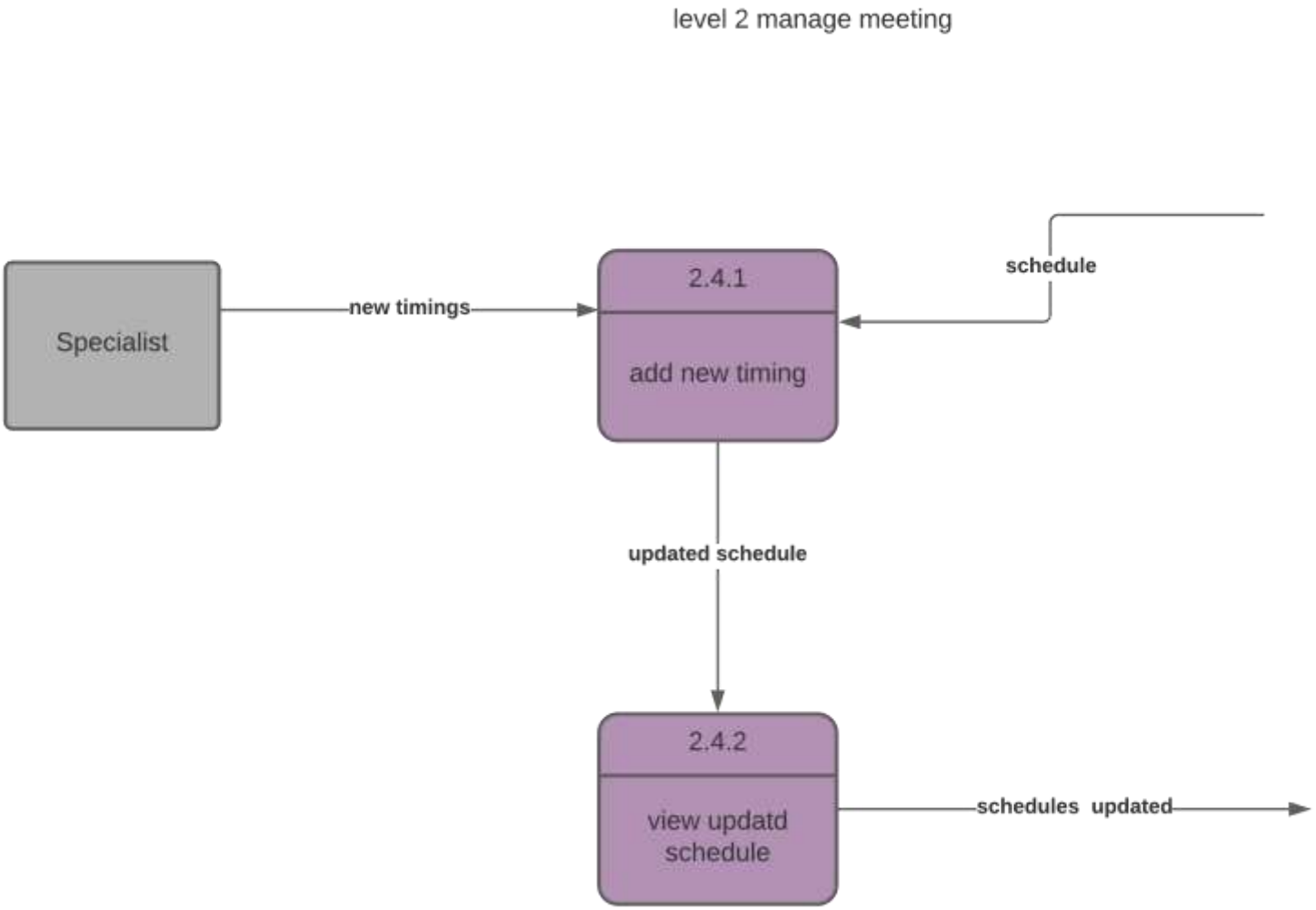


Figure 19 Level 2 Manage Meetings

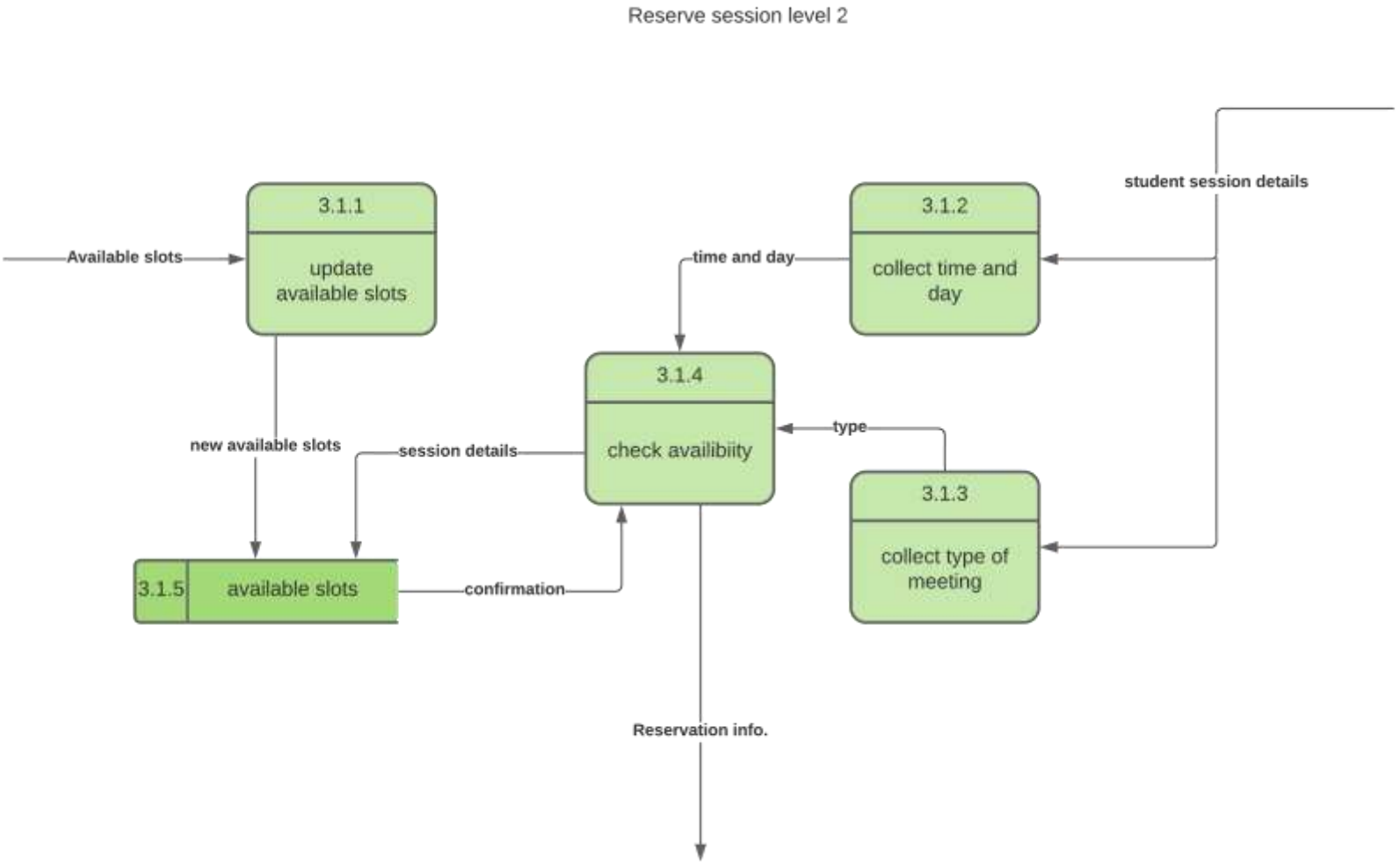


Figure 20 Level 2 Reserve session

2.5 System Architecture

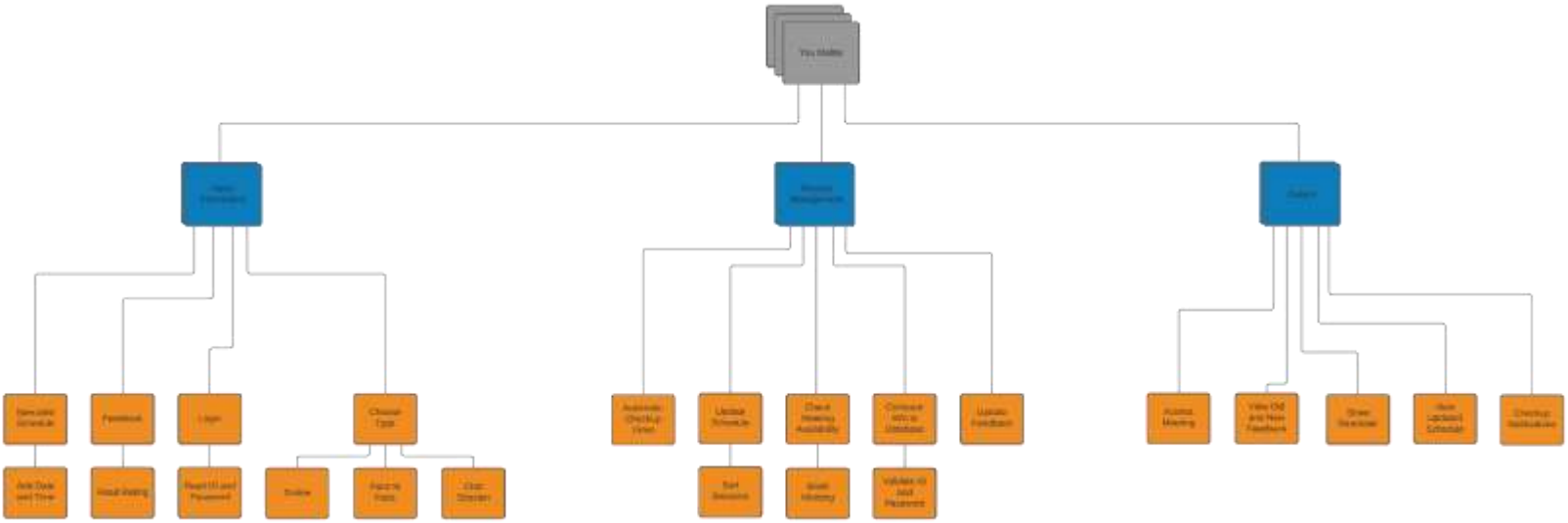


Figure 21 System Architecture

Justification:

Input Information:

- Login: Each student must have an account on the website to have his/her information saved on the database for future access.

- Specialist Schedule: Specialists must have schedules for student to choose when to have their meetings along with the time when they are free.

- Feedback: Specialists submit the information a student needs or required to follow after the end of a meeting or a whole session.

- Choose Type: Giving meeting options to students to make them feel comfortable for the way they want the meeting to go.

Session Management:

- Automatic Checkup Timer: An embedded checkup timer that works automatically to remind the student of their checkup meetings.

- Update Schedule: Automatically done by the system to ensure that the student is up to date with the new timings and also have the sessions sorted to the way they want.

- Check Meeting Availability: Performed after a student checks if the meeting will be available according to the needed date and time, then if it matches, the meeting will be booked.

- Compare Info to Database: Comparing student ID and Password to the database to validate that they are already registered and allow them into their account.

- Update Feedback: Automatically done by the system to ensure that the student is up to date with the new feedback provided by the specialist if anything pops up.

Output:

- Access Meeting: A meeting can now be accessed by the student after booking, checking schedules, and confirming.

- View Old and New Feedback: Feedback whether it's old or new is accessed by the student because old feedback might be useful to understand or perform the new one.

- Show Reminder: Reminders are displayed to have every meeting's date and time available for the student to minimize the risk of missing it.

- View Updated Schedule: Student is given access to new specialists' schedules to check new timings and sort themselves on the comfortable ones.

- Checkup Notifications: Simple popup notifications to remind the student of the timings of their checkups with the specialist for new information.

2.6 Component Diagram

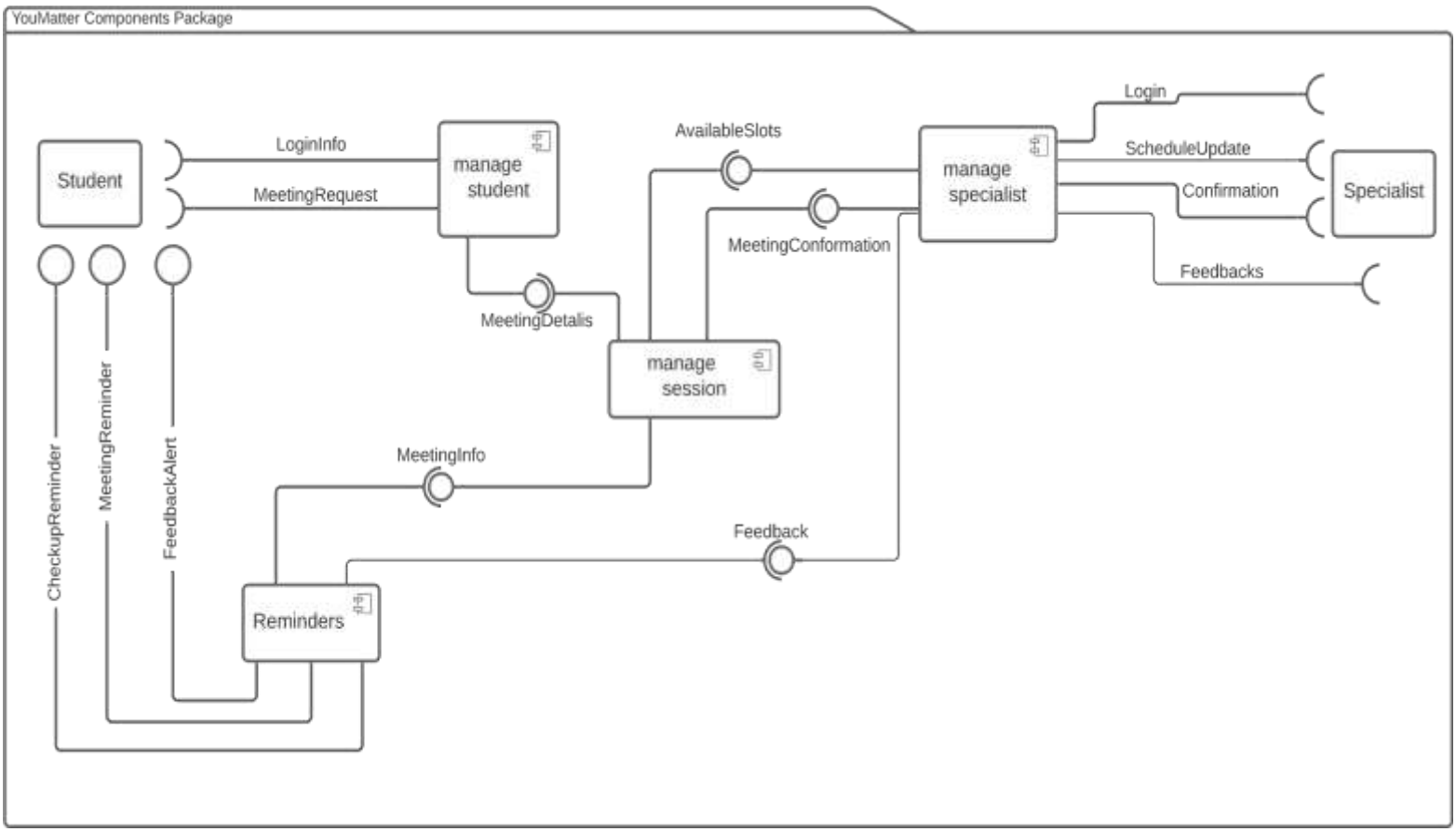


Figure 22 Component Diagram

<<component>> manage student

<<provided interfaces>> Logininfo , MeetingRequest

<<required interfaces>> MeetingDetails

This component handles all inputs from the student and passes on the requested meeting details to the manage session component to be handled.

<<component>> manage specialist

<<provided interfaces>> Login , ScheduleUpdate, Confirmation, Feedbacks

<<required interfaces>> AvailableSlots, MeetingConfirmation, Feedback

This component handles inputs form the specialist and sends the available slots to manage session component and sends meeting confirmation to when a meeting is requested and sends feedback to reminders component so the student can display it.

<<component>> manage session

<<provided interfaces>> availableSlots , MeetingDetails, Meeting confirmation

<<required interfaces>> Meetinginfo

This component does not take direct input from the user but instead it coordinates outputs from other components to reserve meetings and set reminders

<<component>> reminders

<<provided interfaces>> Meetinginfor, Feedbacks

<<required interfaces>> Checkupreminder, MeetingReminder, FeedbackAlert

This component is responsible for alering the user via notifications or reminders tab of the upcoming meeting, previous meetings' feedback and weekly checkup countdown.

2.7 Class Diagram

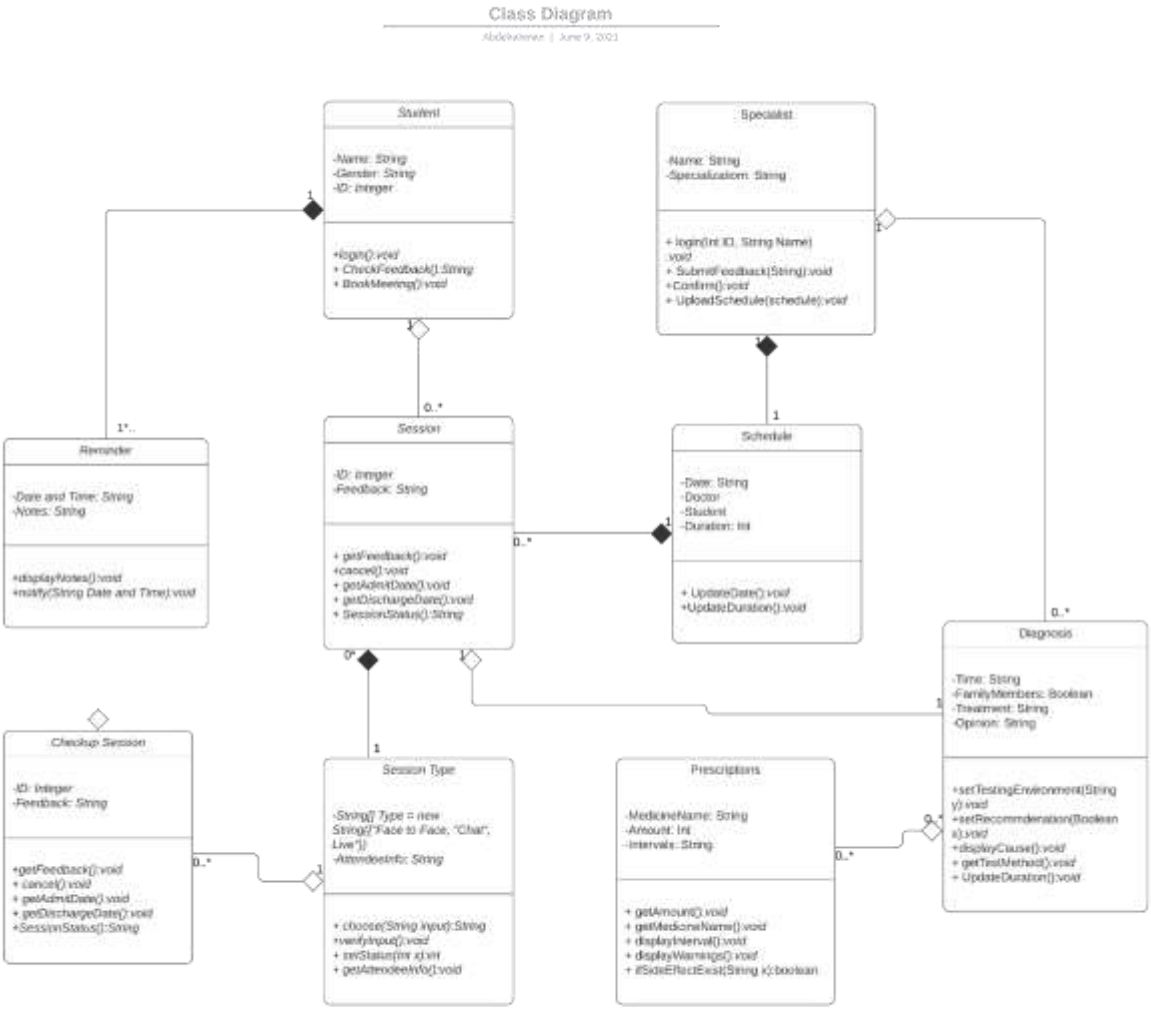


Figure 23 Class Diagram

2.8 System Architecture Styles:

2.8.1 Model-View-Controller Architecture Style

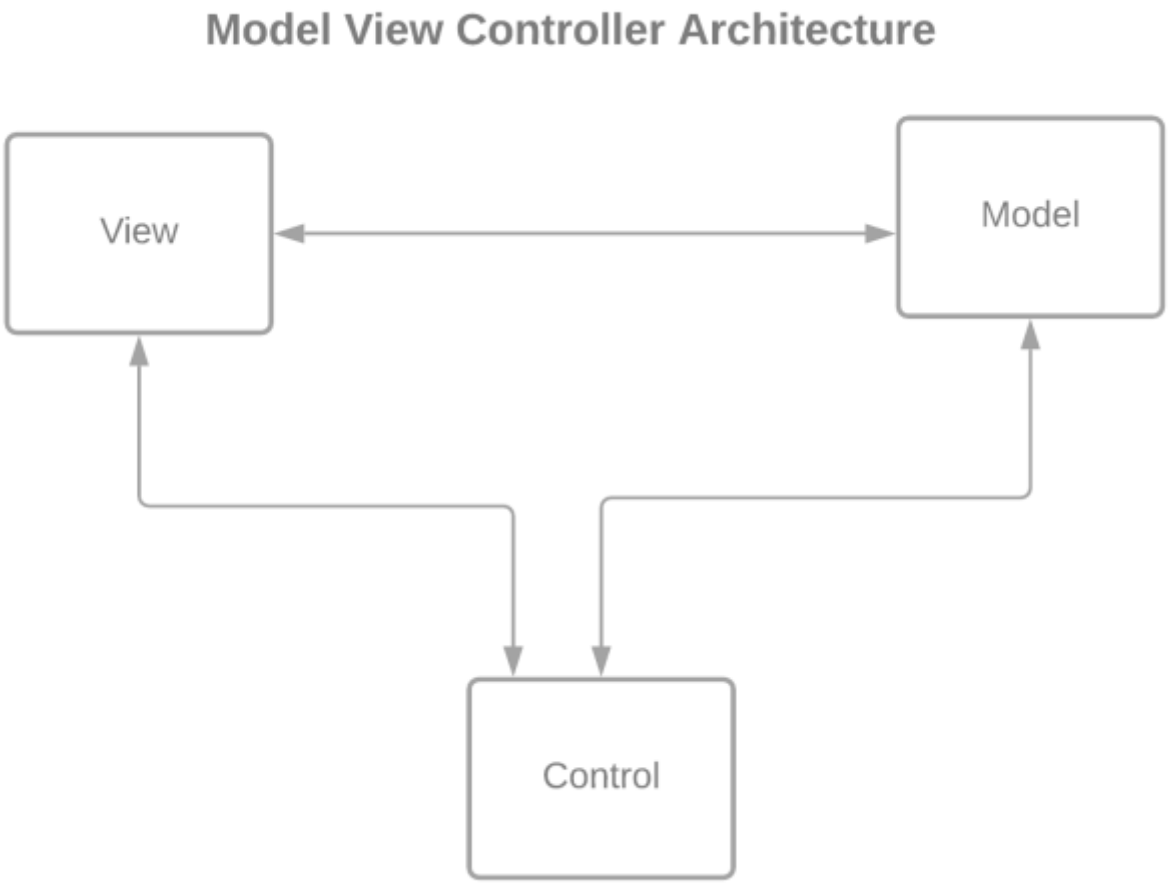


Figure 24 MVC architecture style

Justification

- MVC We could use MVC to build this website as the work can be divided among the groups; some could work in the view, some for the control, and the later for the model.
- Flexible and easy to be maintained
- Allows multiple view points

2.8.2 Data-Centered Architecture Style

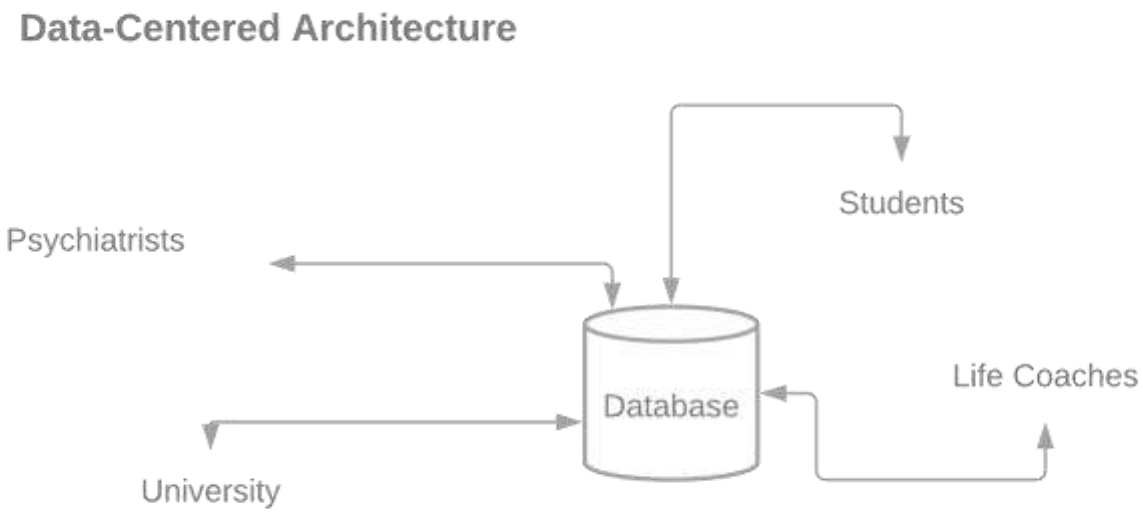


Figure 25 Data-Centered Architecture Style

Justification

- Each student/Specialist could carry out each process independently
- More students could be added

2.8.3 Object Oriented Architecture Style

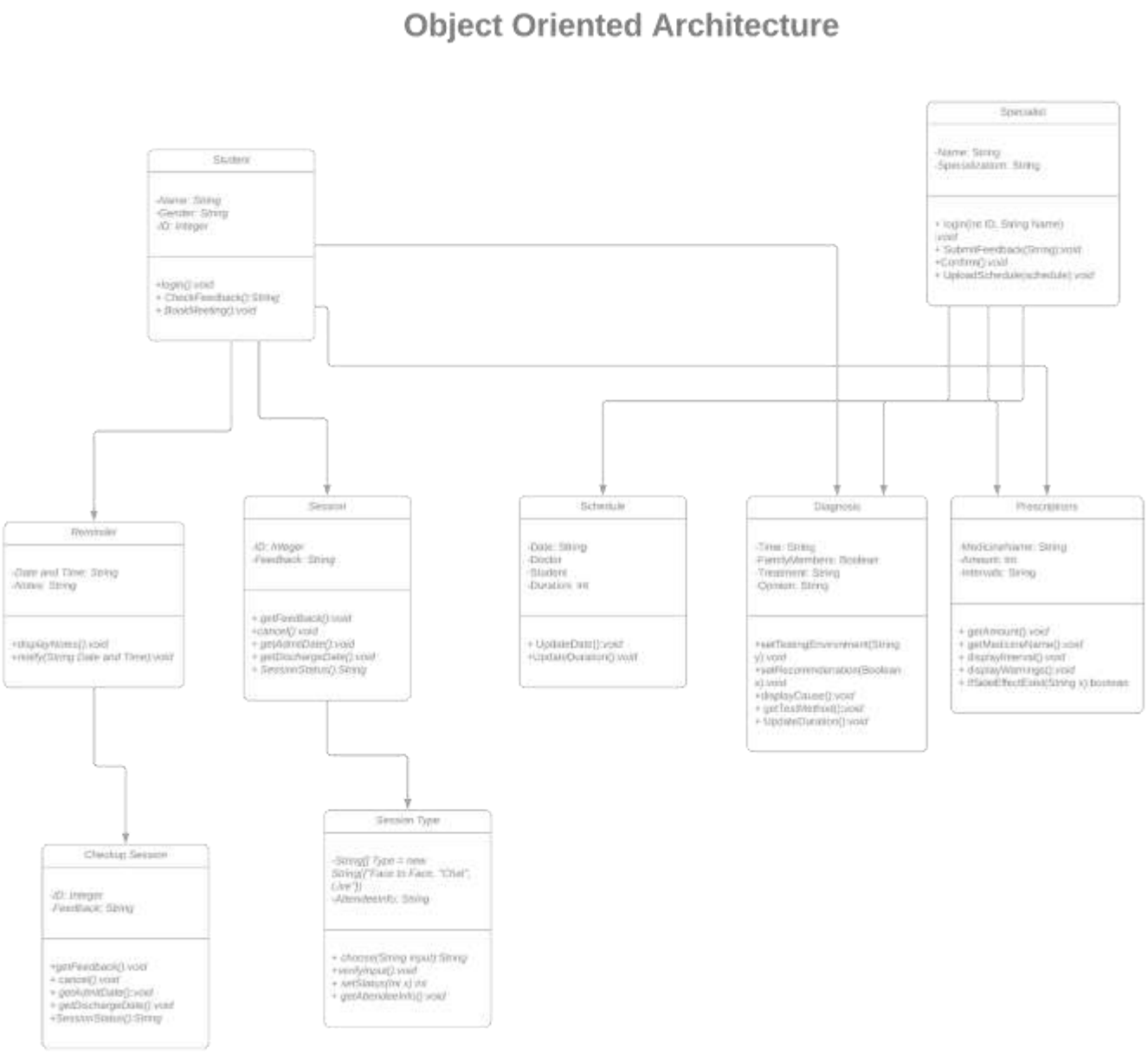


Figure 26 Object Oriented

Justification

- Students & psychiatrist reflects real world entities which can be implemented using object oriented programing
- Easily understandable
- Objects are loosely coupled so their implementation can be modified without affecting other objects.
- Object-oriented implementation languages are widely used.

2.8.4 Layered Architecture within object oriented

Figure 27Layered Architecture

Justification

- Allow for incremental development
- If an interface is changed ,only the part using this system requires modification

2.8.5 Merged Architecture Style

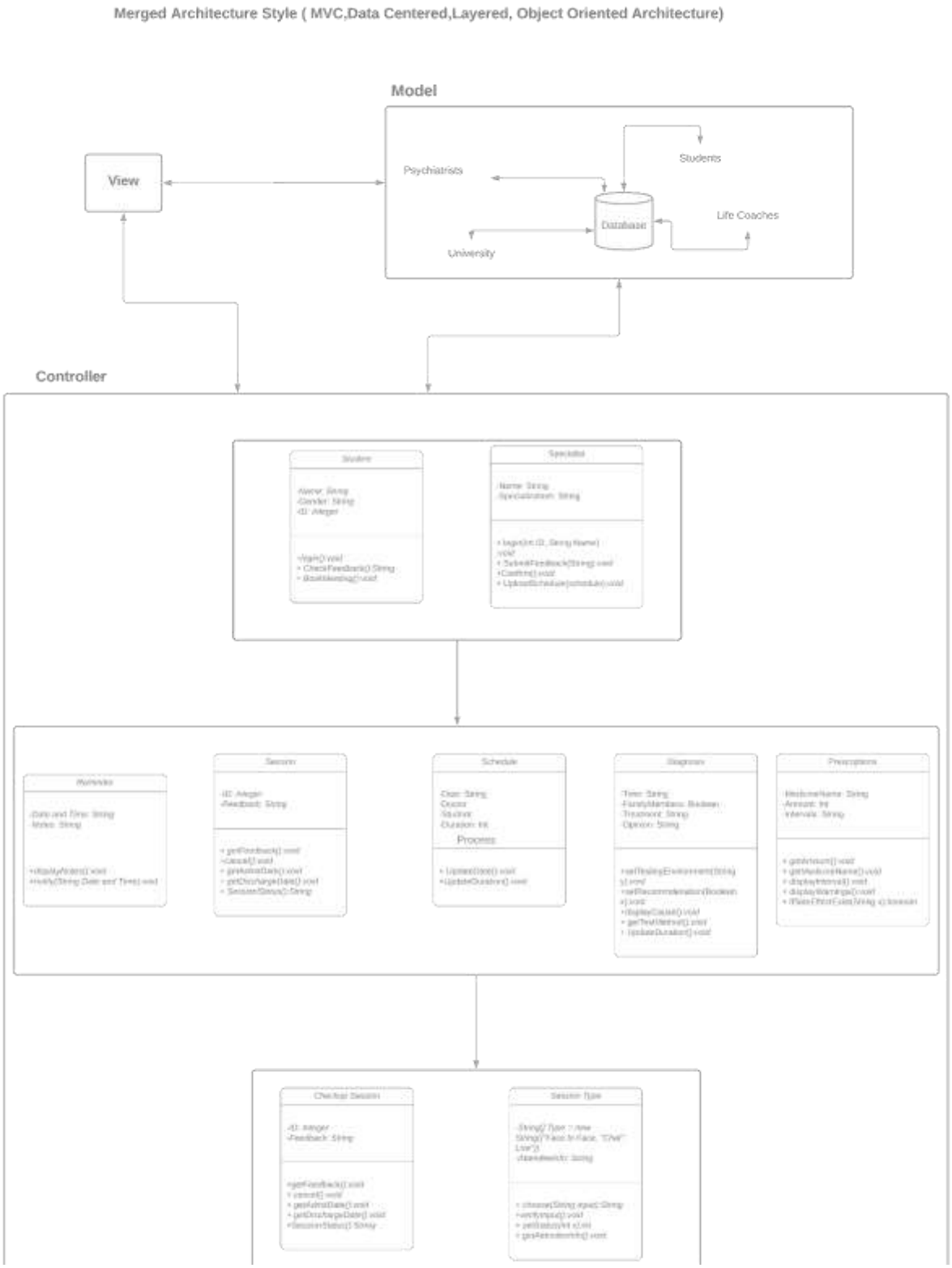


Figure 28 Merged Architecture

2.9 User Interface Design and End-User guide.

The user interface is:

- High Learnability-Easy to use and learn
- Interface is user familiar uses terms familiar to users
- Users are able to recover from their errors
- Operations are started the same way
- Fast, Full-screen interaction is possible with immediate access anywhere on the screen
- User may quickly switch from one task to another
- Minimizes the user's memory load
- Typing effort is minimal
- Users do not need to remember command names
- Has simple data entry
- High recoverability-can recover from errors easily
- High robustness- can withstand user errors

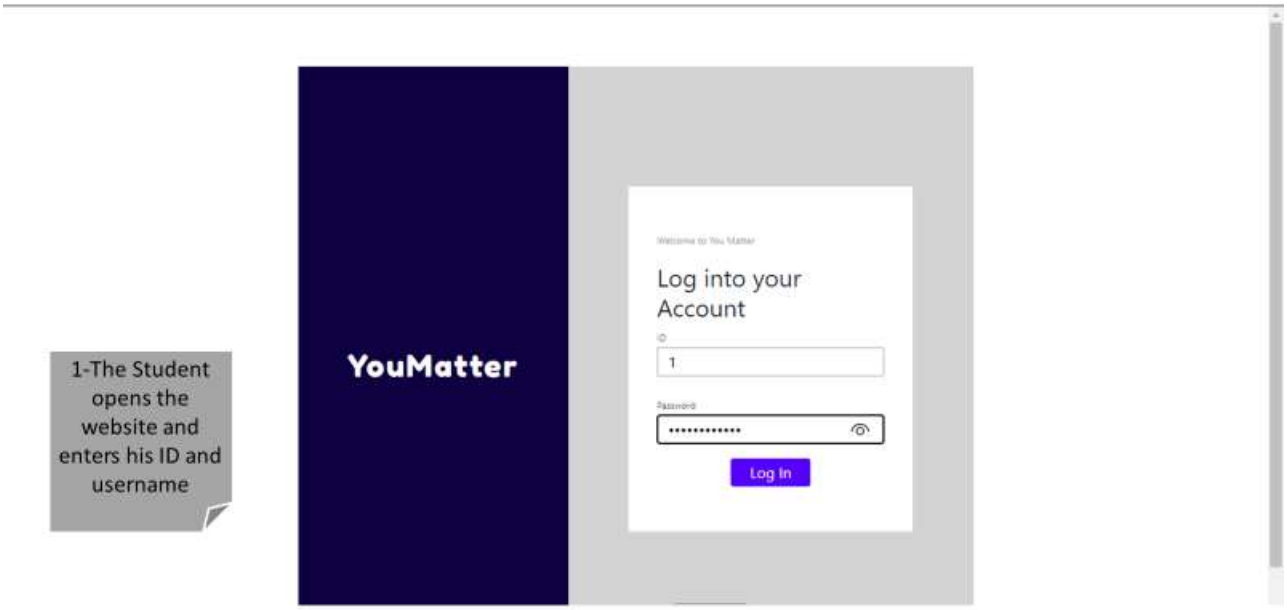
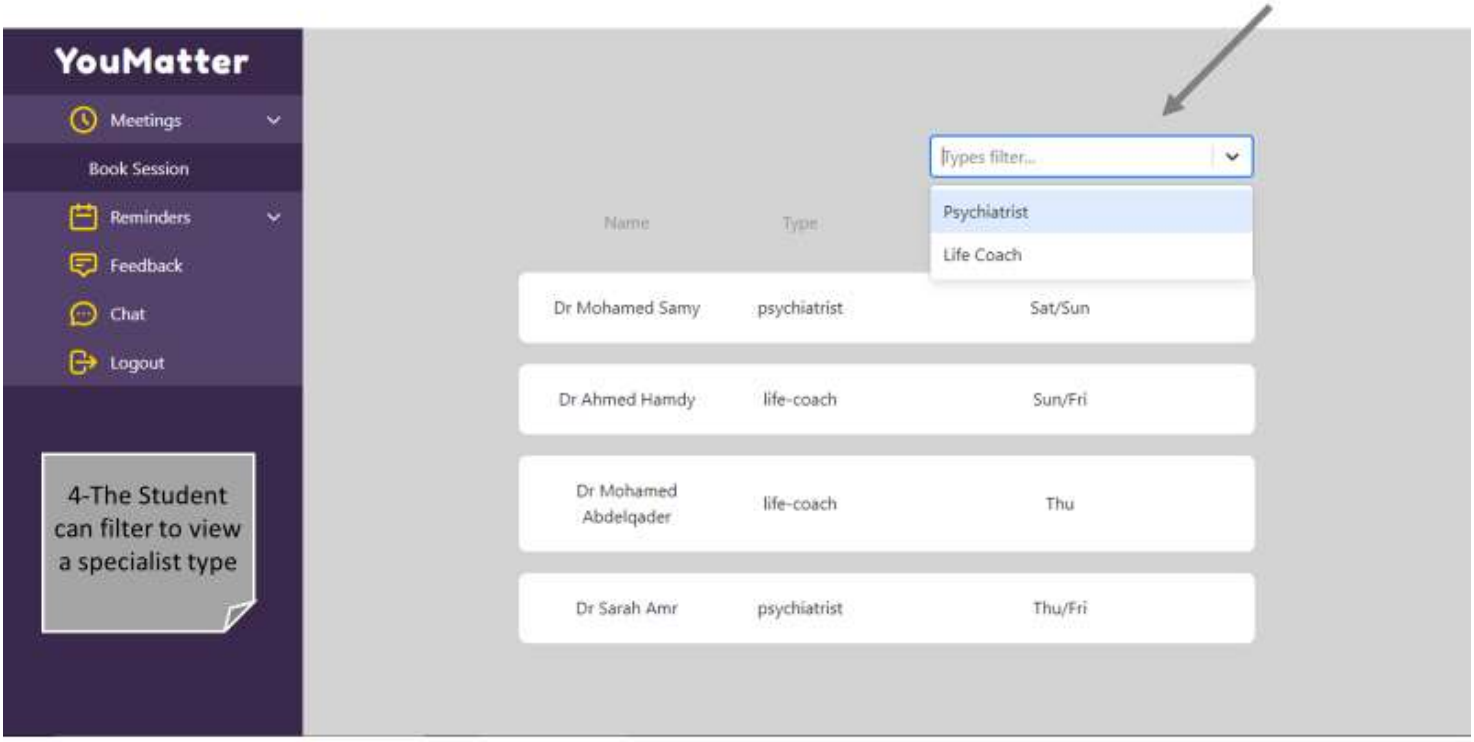
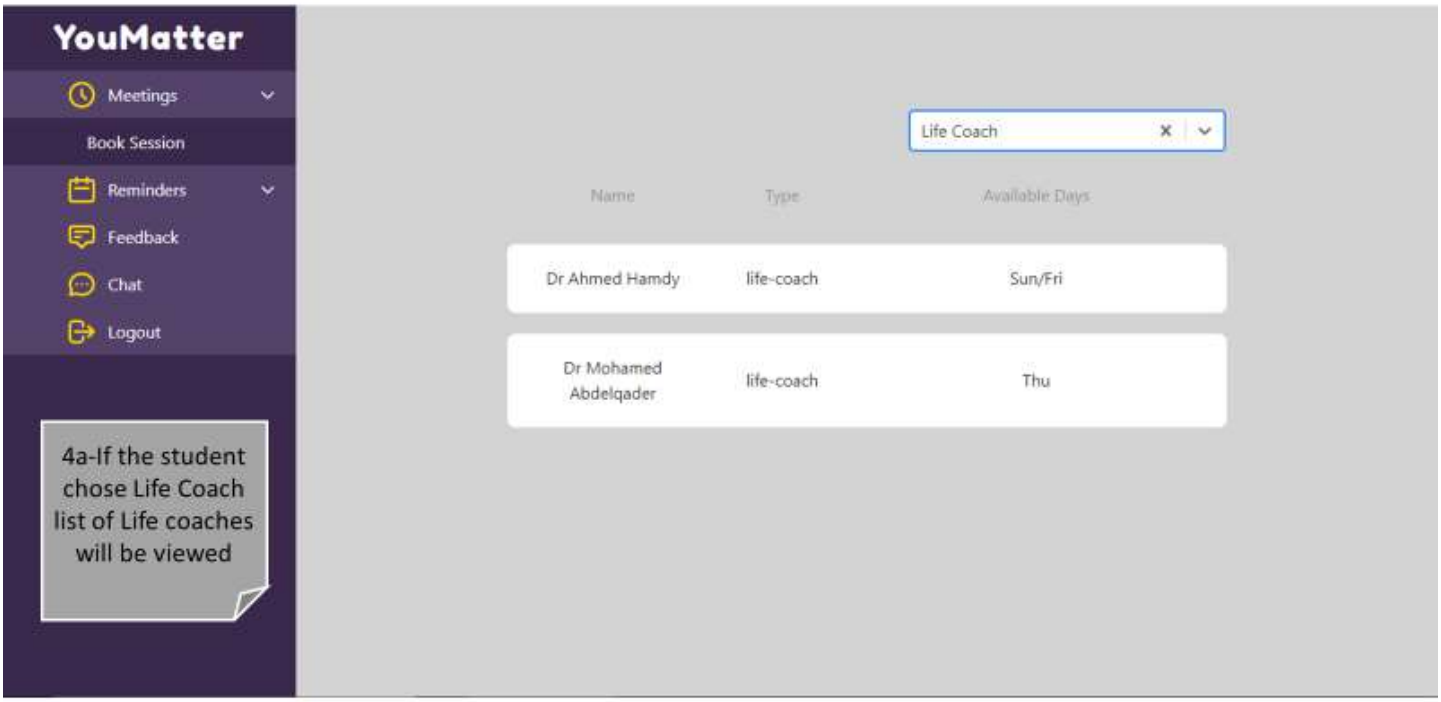


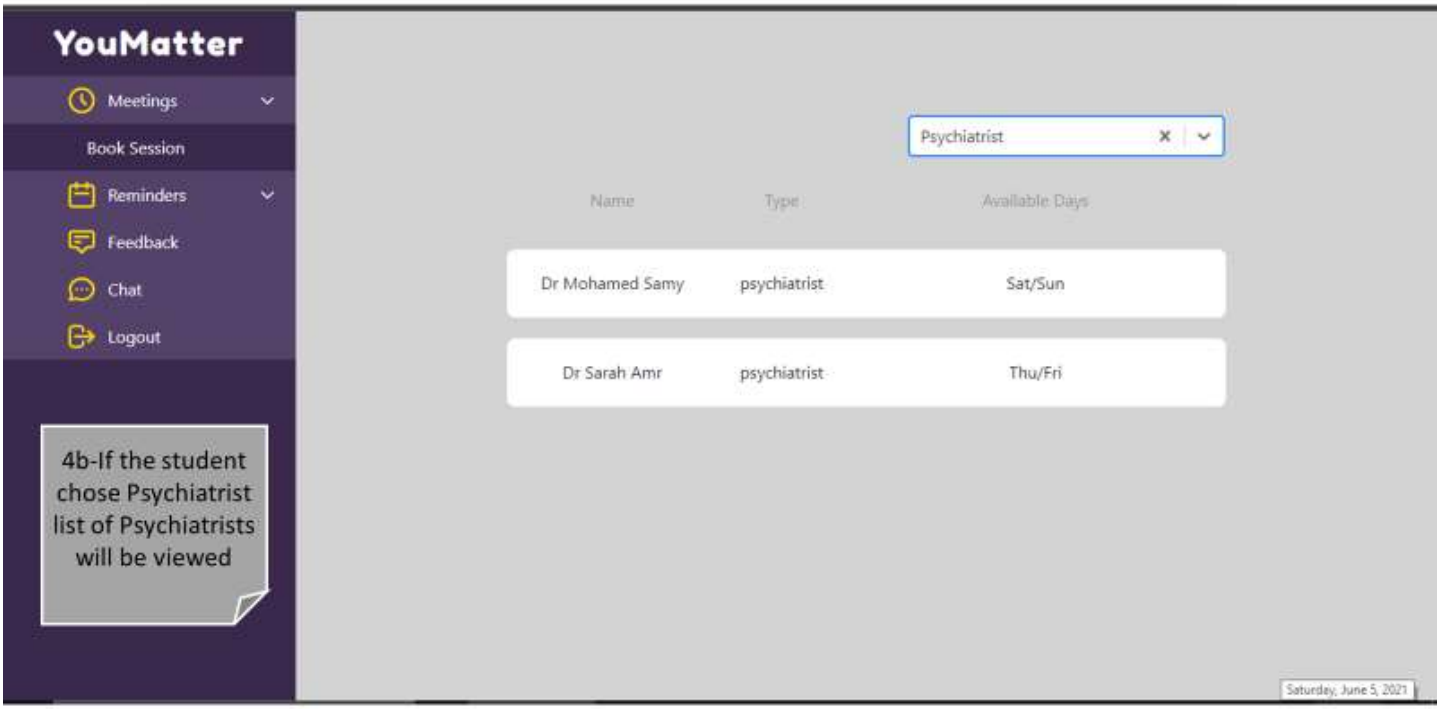
Figure 29 User interface design and end-user guide

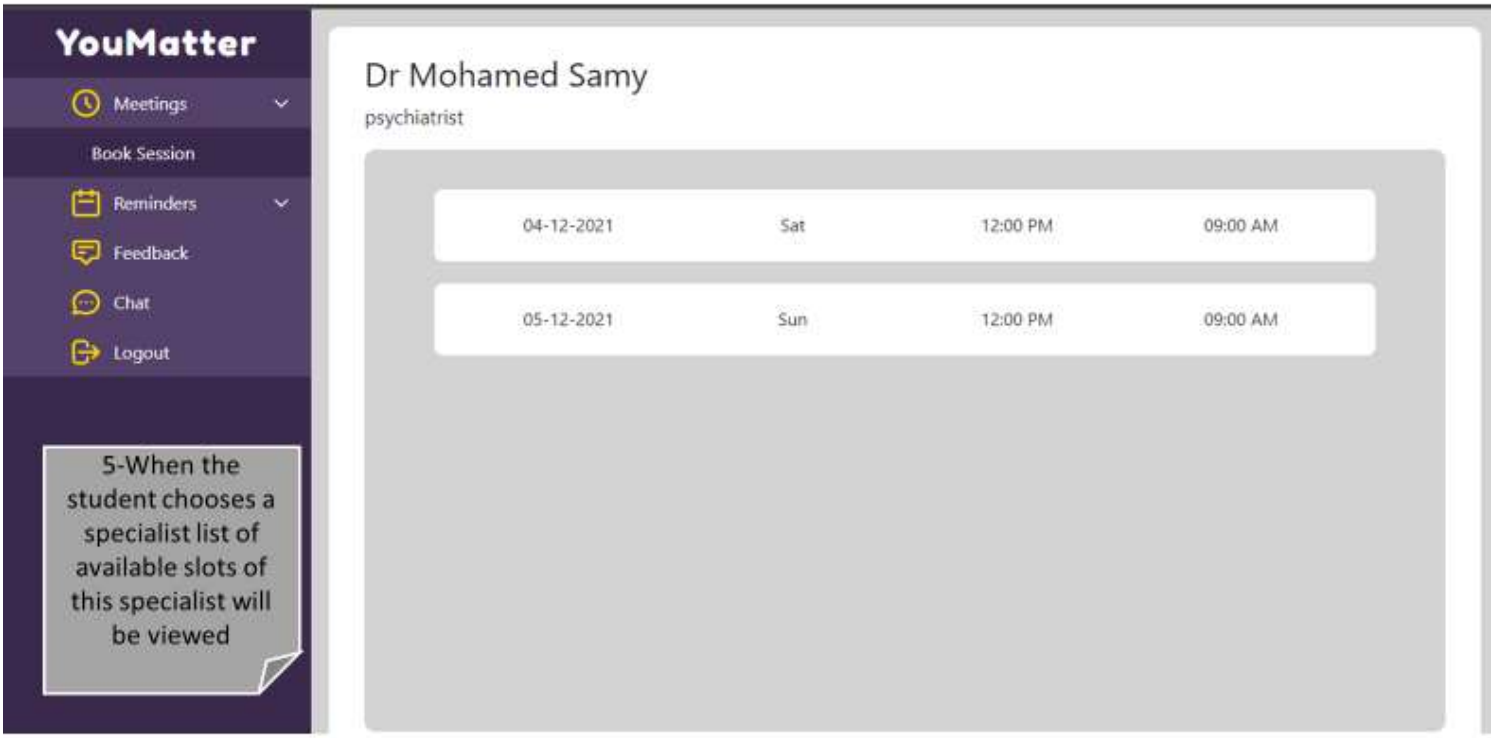

YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
3-The Student Selects meetings where he can book a session
Types filter...
Name
Type
Available Days
Dr Mohamed Samy
psychiatrist
Sat/Sun
Dr Ahmed Hamdy
life-coach
Sun/Fri
Dr Mohamed Abdelqader
life-coach
Thu
Dr Sarah Amr
psychiatrist
Thu/Fri

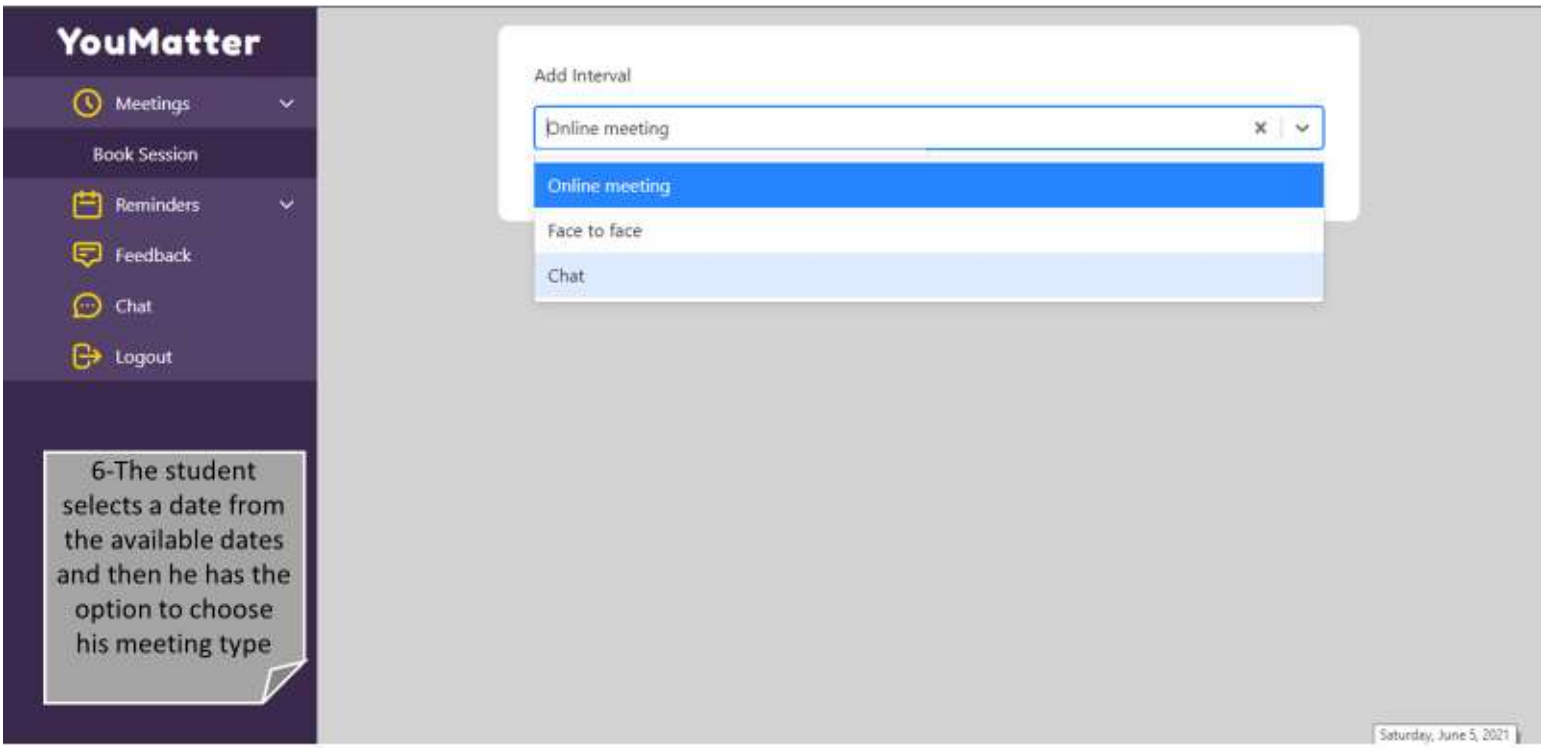

YouMatter
Meetings
Reminders
Feedback
Chat
Logout
2-The Student is directed to do the main page
MENTAL HEALTH MATTERS

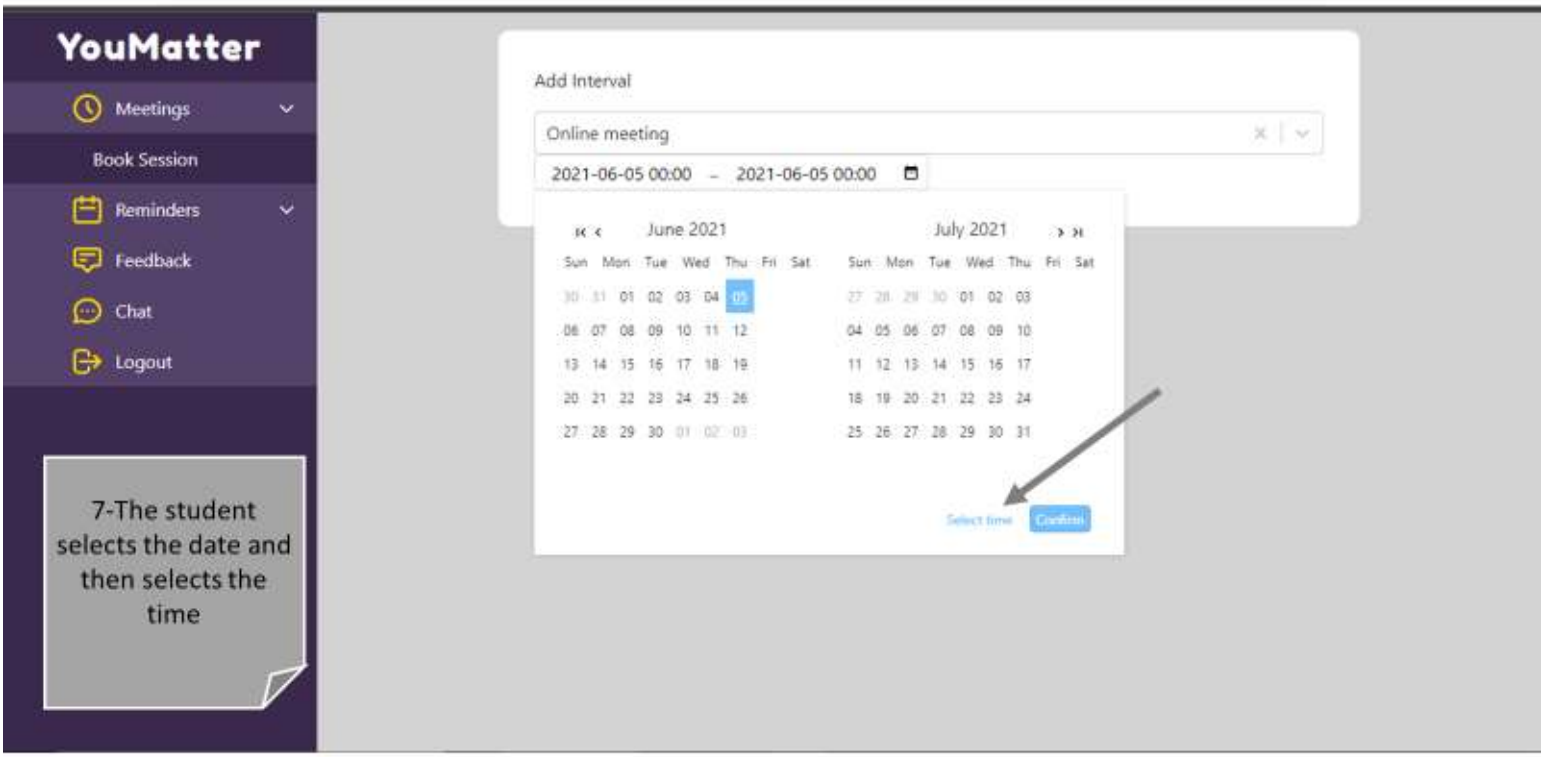

YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
4-The Student can filter to view a specialist type
Types filter...
Psychiatrist
Life Coach
Name
Type
Dr Mohamed Samy
psychiatrist
Sat/Sun
Dr Ahmed Hamdy
life-coach
Sun/Fri
Dr Mohamed Abdelqader
life-coach
Thu
Dr Sarah Amr
psychiatrist
Thu/Fri


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
4a-If the student chose Life Coach list of Life coaches will be viewed
Life Coach
Name
Type
Available Days
Dr Ahmed Hamdy
life-coach
Sun/Fri
Dr Mohamed Abdelqader
life-coach
Thu

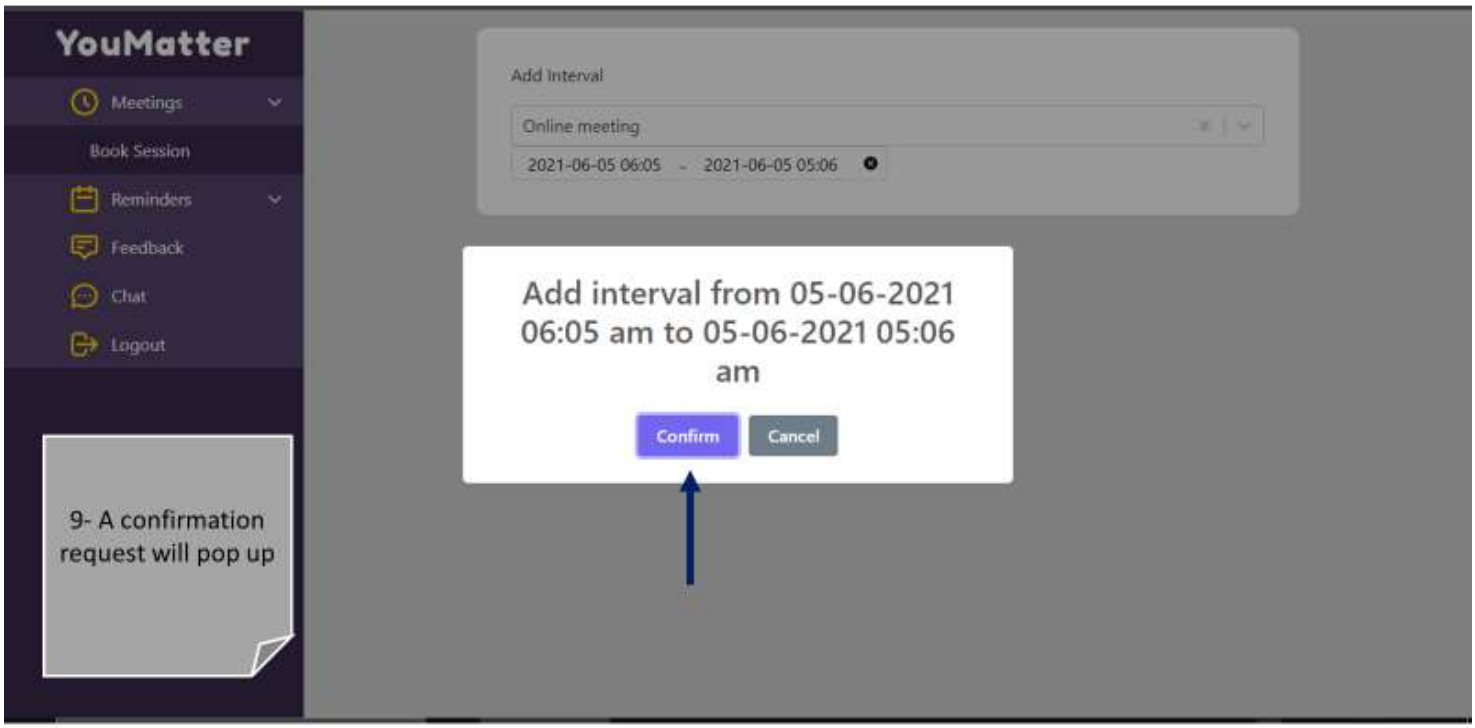

YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
Psychiatrist
Name
Type
Available Days
Dr Mohamed Samy
psychiatrist
Sat/Sun
Dr Sarah Amr
psychiatrist
Thu/Fri
4b-If the student chose Psychiatrist list of Psychiatrists will be viewed
Saturday, June 5, 2021

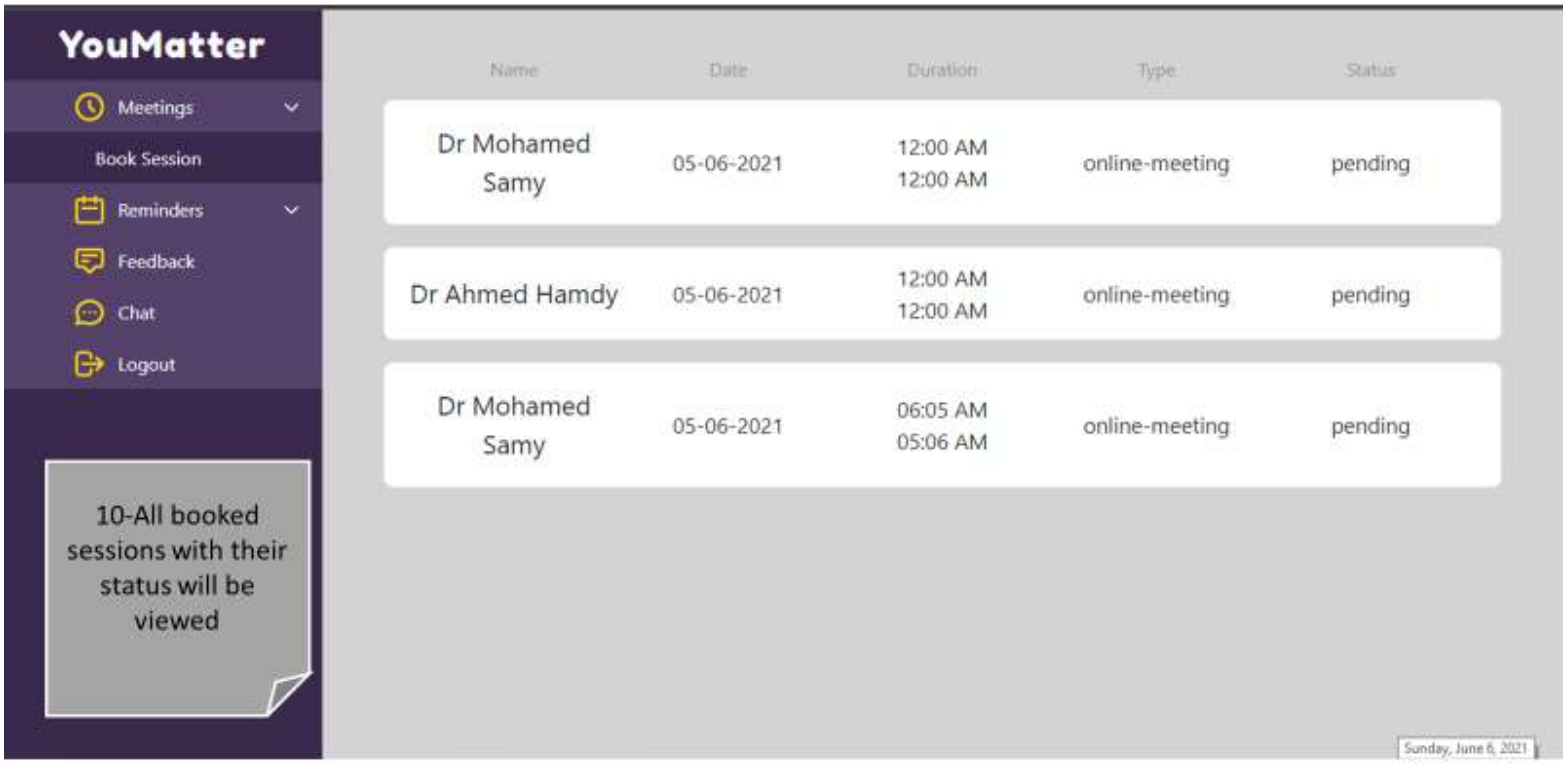

YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
5-When the student chooses a specialist list of available slots of this specialist will be viewed
Dr Mohamed Samy
psychiatrist
04-12-2021
Sat
12:00 PM
09:00 AM
05-12-2021
Sun
12:00 PM
09:00 AM


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
6-The student selects a date from the available dates and then he has the option to choose his meeting type
Add Interval
Online meeting
Online meeting
Face to face
Chat
Saturday, June 5, 2021


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
7-The student selects the date and then selects the time
Add Interval
Online meeting
2021-06-05 00:00 – 2021-06-05 00:00
June 2021
July 2021
Sun Mon Tue Wed Thu Fri Sat
Select time
Confirm

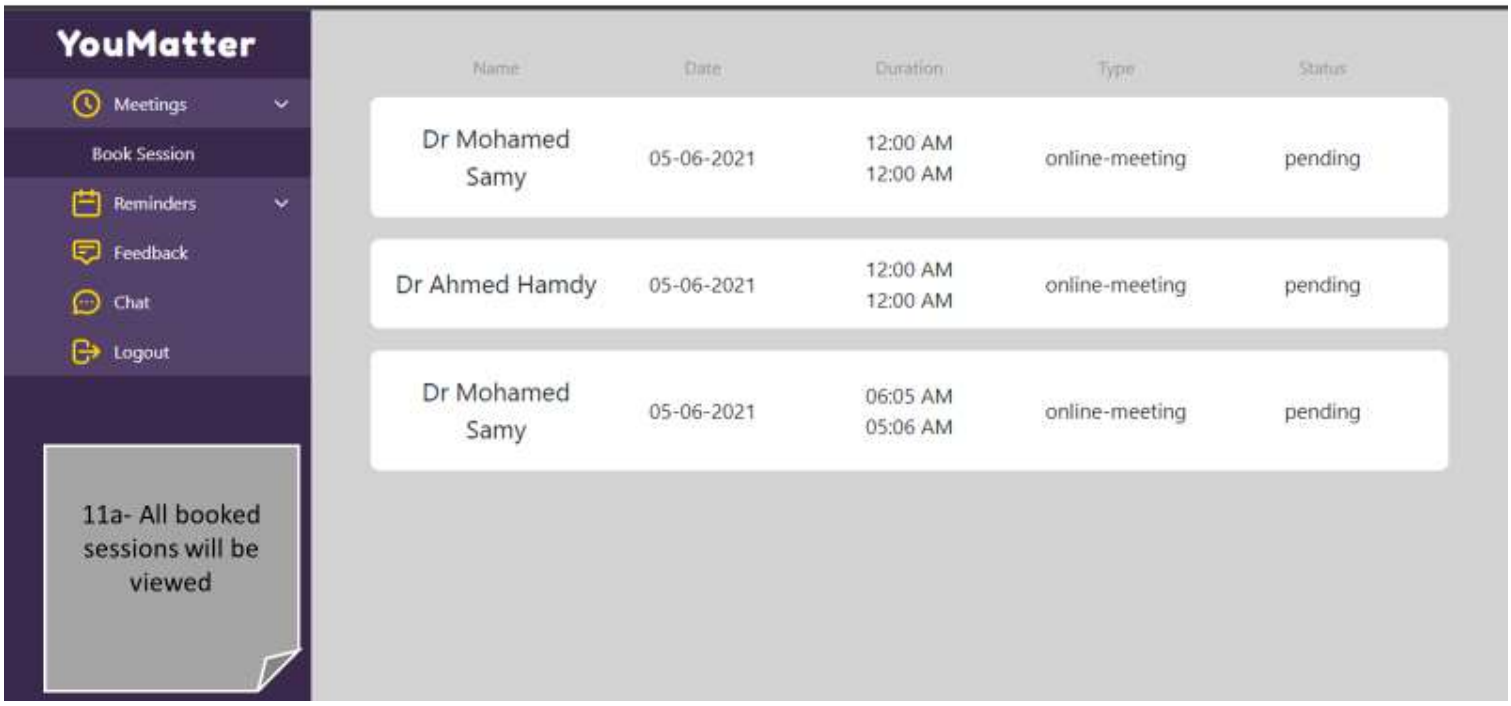

YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
8-The student selects the interval and clicks confirm
Add Interval
Online meeting
2021-06-05 00:00 – 2021-06-05 00:00
2021-06-05
2021-06-05
Select date
Confirm


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
Add Interval
Online meeting
2021-06-05 06:05 - 2021-06-05 05:06
Add interval from 05-06-2021 06:05 am to 05-06-2021 05:06 am
Confirm
Cancel
9- A confirmation request will pop up


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
Name
Date
Duration
Type
Status
Dr Mohamed Samy
05-06-2021
12:00 AM 12:00 AM
online-meeting
pending
Dr Ahmed Hamdy
05-06-2021
12:00 AM 12:00 AM
online-meeting
pending
Dr Mohamed Samy
05-06-2021
06:05 AM 05:06 AM
online-meeting
pending
10-All booked sessions with their status will be viewed
Sunday, June 6, 2021


YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
11-When student clicks reminders he will have 3 options to choose from
MENTAL HEALTH MATTERS

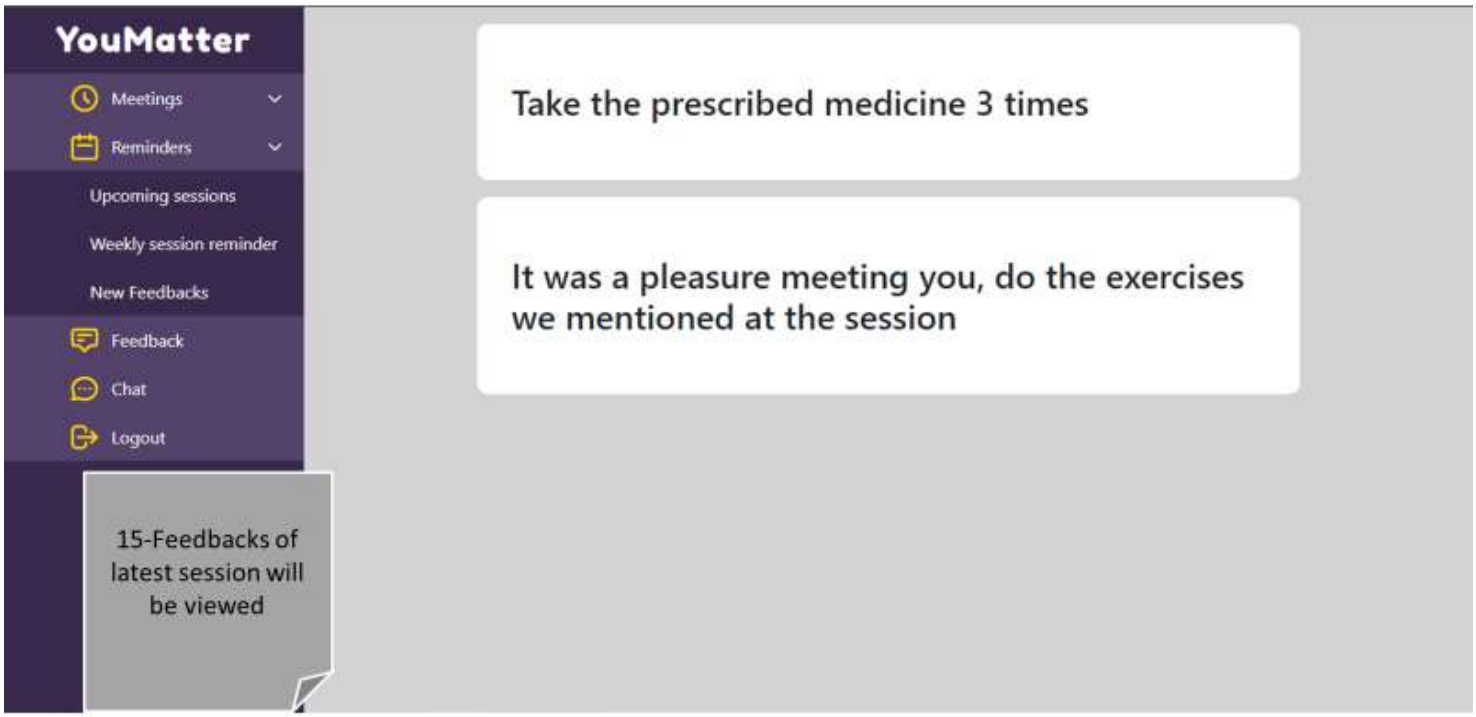

YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
11-If he clicked on Upcoming sessions
MENTAL HEALTH MATTERS


YouMatter
Meetings
Book Session
Reminders
Feedback
Chat
Logout
Name
Date
Duration
Type
Status
Dr Mohamed Samy
05-06-2021
12:00 AM
12:00 AM
online-meeting
pending
Dr Ahmed Hamdy
05-06-2021
12:00 AM
12:00 AM
online-meeting
pending
Dr Mohamed Samy
05-06-2021
06:05 AM
05:06 AM
online-meeting
pending
11a- All booked sessions will be viewed

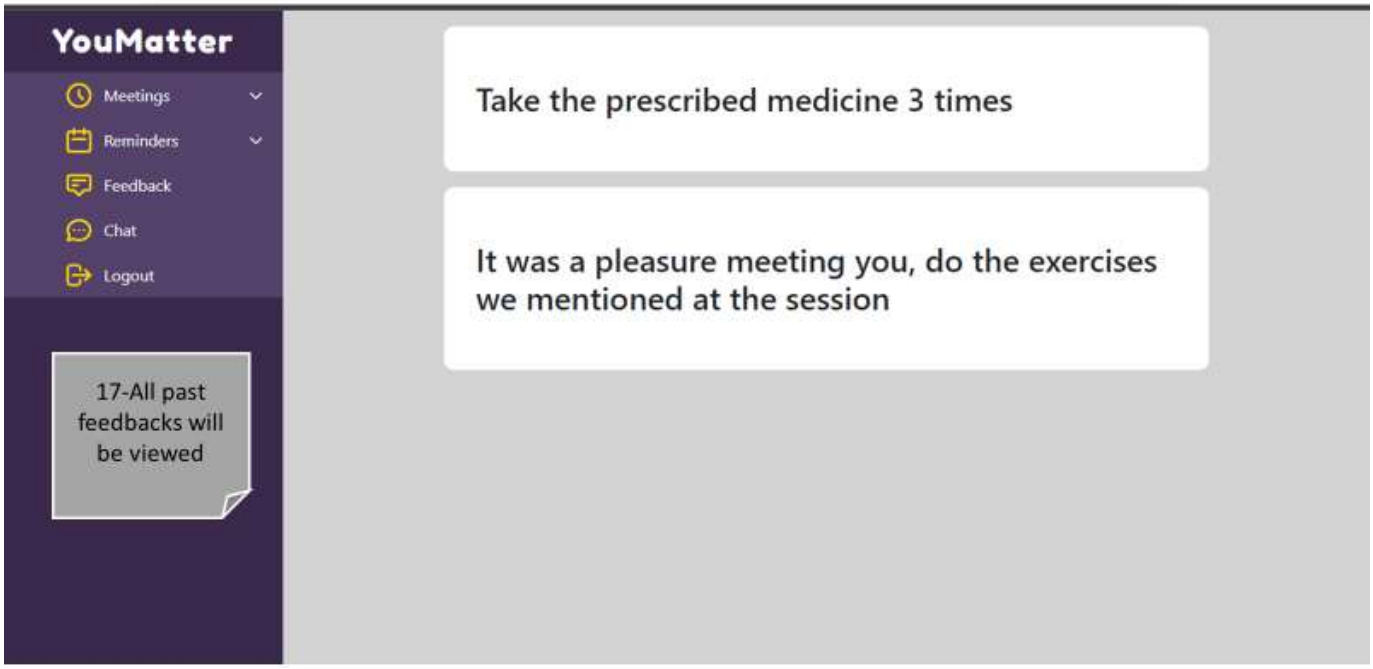

YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
12-If he clicked on Weekly Session reminder
MENTAL HEALTH MATTERS


YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
13- A count down will be viewed of the days left for the next checkup
6
days
22
hours
11
minutes
13
seconds

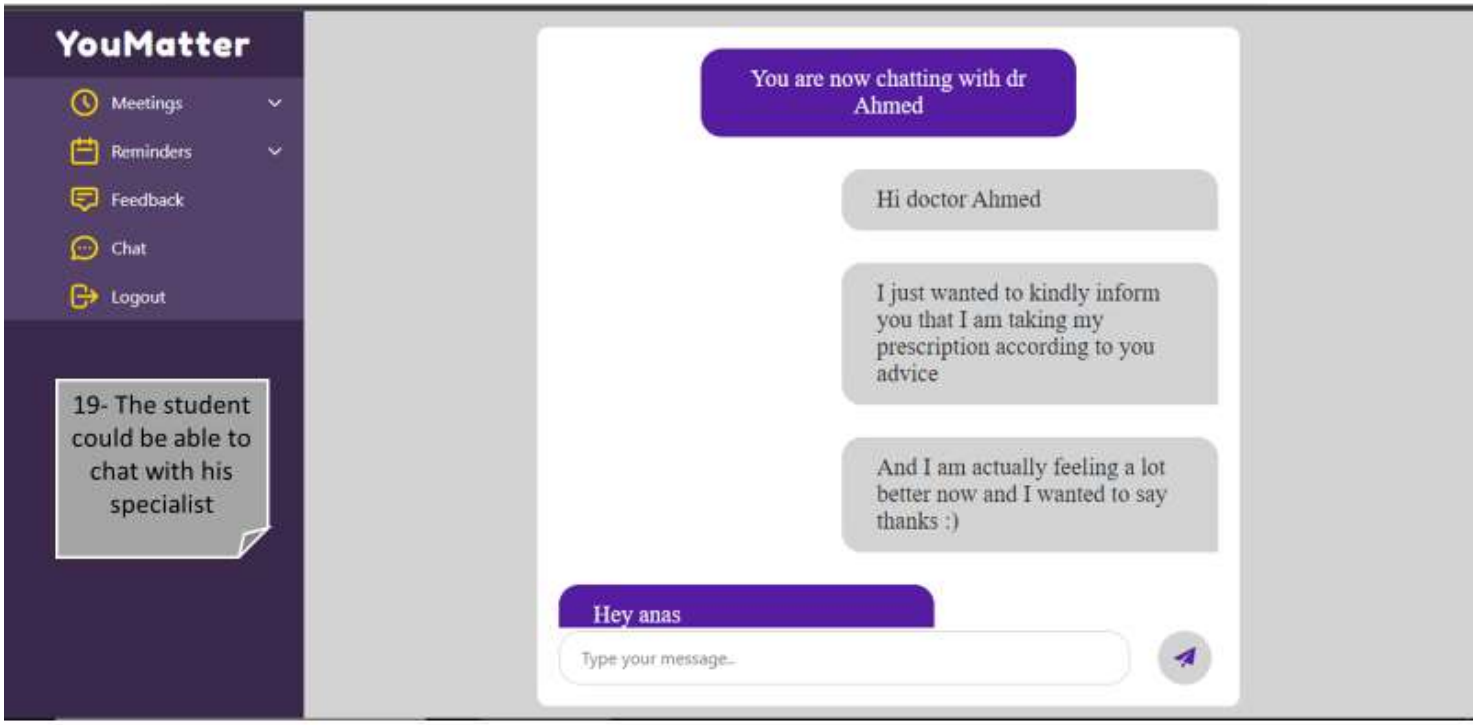

YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
14-If he clicked on New Feedbacks
MENTAL HEALTH MATTERS


YouMatter
Meetings
Reminders
Upcoming sessions
Weekly session reminder
New Feedbacks
Feedback
Chat
Logout
Take the prescribed medicine 3 times
It was a pleasure meeting you, do the exercises we mentioned at the session
15-Feedbacks of latest session will be viewed


YouMatter
Meetings
Reminders
Feedback
Chat
Logout
16-if the student clicked on feedback
MENTAL HEALTH MATTERS

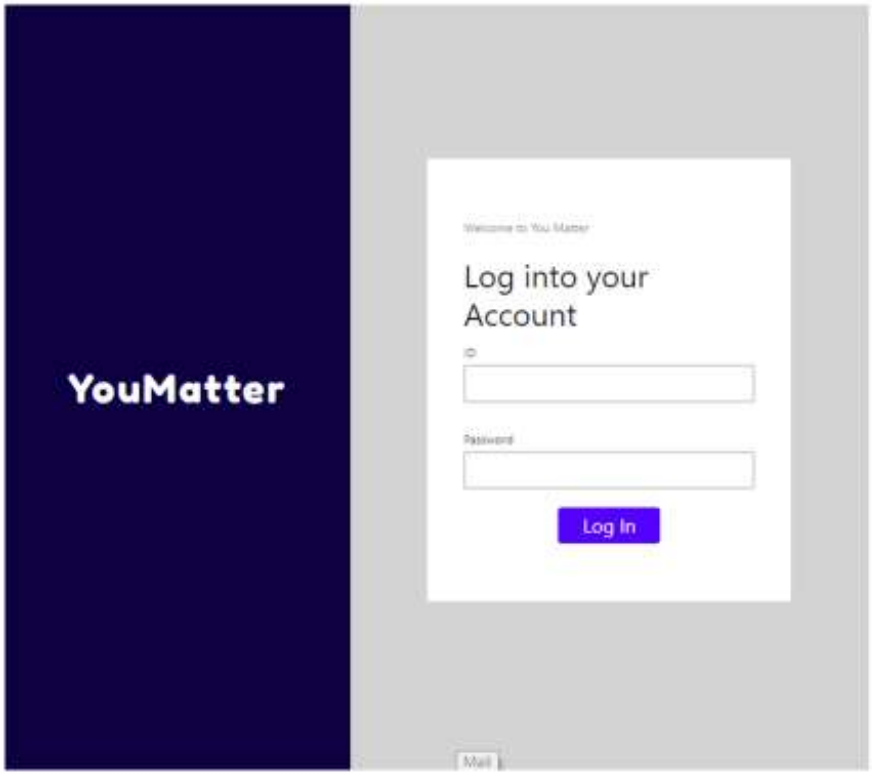

YouMatter
Meetings
Reminders
Feedback
Chat
Logout
17-All past feedbacks will be viewed
Take the prescribed medicine 3 times
It was a pleasure meeting you, do the exercises we mentioned at the session


YouMatter
Meetings
Reminders
Feedback
Chat
Logout
18-if the student clicked on chat
MENTAL HEALTH MATTERS


YouMatter
Meetings
Reminders
Feedback
Chat
Logout
19- The student could be able to chat with his specialist
You are now chatting with dr Ahmed
Hi doctor Ahmed
I just wanted to kindly inform you that I am taking my prescription according to you advice
And I am actually feeling a lot better now and I wanted to say thanks :)
Hey anas
Type your message...


YouMatter
Meetings
Reminders
Feedback
Chat
Logout
20-if the student clicked on logout
MENTAL
HEALTH
MATTERS

21- He will be directed again to the login page



3. Cost Estimation

Software is a dicey business because for it to be considered successful it needs to meet all the requirements, be delivered on time, and last but not least be within the budget. That is why early project cost estimation is required to determine whether the project will be within the client's budget or not. The cost estimation is affected by several things including the efforts, tools, duration, and overheads. The cost estimation for the YouMatter project will be using the function points methodology.

Table 4: Function points table

User inputs	User outputs	Inquiries	Files	Interface
1-Enter student info 2-Enter specialist info 3- Enter specialist schedule 4-Send feedback 5-Confirm meeting reservation	1-Specialist schedule 2-Meeting reminder 3-Checkup countdown	1-Enter student meeting choice	1-Specialists 2-Student's history 3-meetings and feedback's history	1-Student's info (shared with university database)

Table 5: Function point calculation

Measurement parameter	Count	Weighting factor	Total
Number of user inputs	5	4	20
Number of user outputs	3	4	12
Number of user inquiries	1	6	6
Number of files	3	10	30
Number of external interfaces	1	5	5
			$\sum = 73$

Table 6: Function point fourteen factors

1-Backup and recovery	2
2-Data communication	3
3-Distributed processing function	3
4-Is performance critical?	2
5-Existing operating environment	3
6-Online data entry	5
7-Input transaction built over multiple screens	2
8-Master files updated online	4
9-Complexity of inputs, outputs, files and inquiries	2
10-Complexity of processing	2
11-Code design for re-use	3
12-Are conversion/installation included in design	1
13-Multiple installations	0
14-Application designed to facilitate change by user	1
	$\sum = 33$

$$FP = UFC * [0.65 + 0.01 * \sum_{i-1}^{i-14} fi]$$

$$FP = 73 * [0.65 + 0.01 * 33]$$

$$\boldsymbol{FP = 71.54}$$

4. Conclusion

YouMatter is a student-based idea that focuses on the mental health of students during their academic journey. By keeping track of the student's mental health and keeping an eye on it will prevent students from going through difficulties and fail their exams. The website reminds the students of all their booked sessions and the time left for their upcoming session. The students have the right to choose their meeting type to be online, face to face or an online conversation and select their session's intervals with life coaches or psychiatrists based upon their preferences where a feedback after each session is provided.

The documents show all user and system requirements, the feasibility study and all requirements validations needed as well as the all the design diagrams needed for the implementation of the software such as the state diagram, data flow diagrams, component diagrams, use case diagrams and swimlanes, class diagrams, System architecture ,Architecture styles used and interaction diagrams which aids in implementation, also providing an end user guide to help the users use the software easily without any obstacles. Also, a cost estimation is provided to help estimate the cost of this software to avoid any conflicts during the development stage of the software.

YouMatter goal is to help achieve a healthy generation with a strong mental and physical health for a better life and a better living and to spread awareness about the importance